Oil, Paint and Drug Reporter

THE CHEMICAL MARKET AUTHORITY

February 13, 1961

PHOSPHORUS: EXPANSION WITH CAUTION

OPD SPECIAL 'DEPTH' REPORT

PAGE THREE

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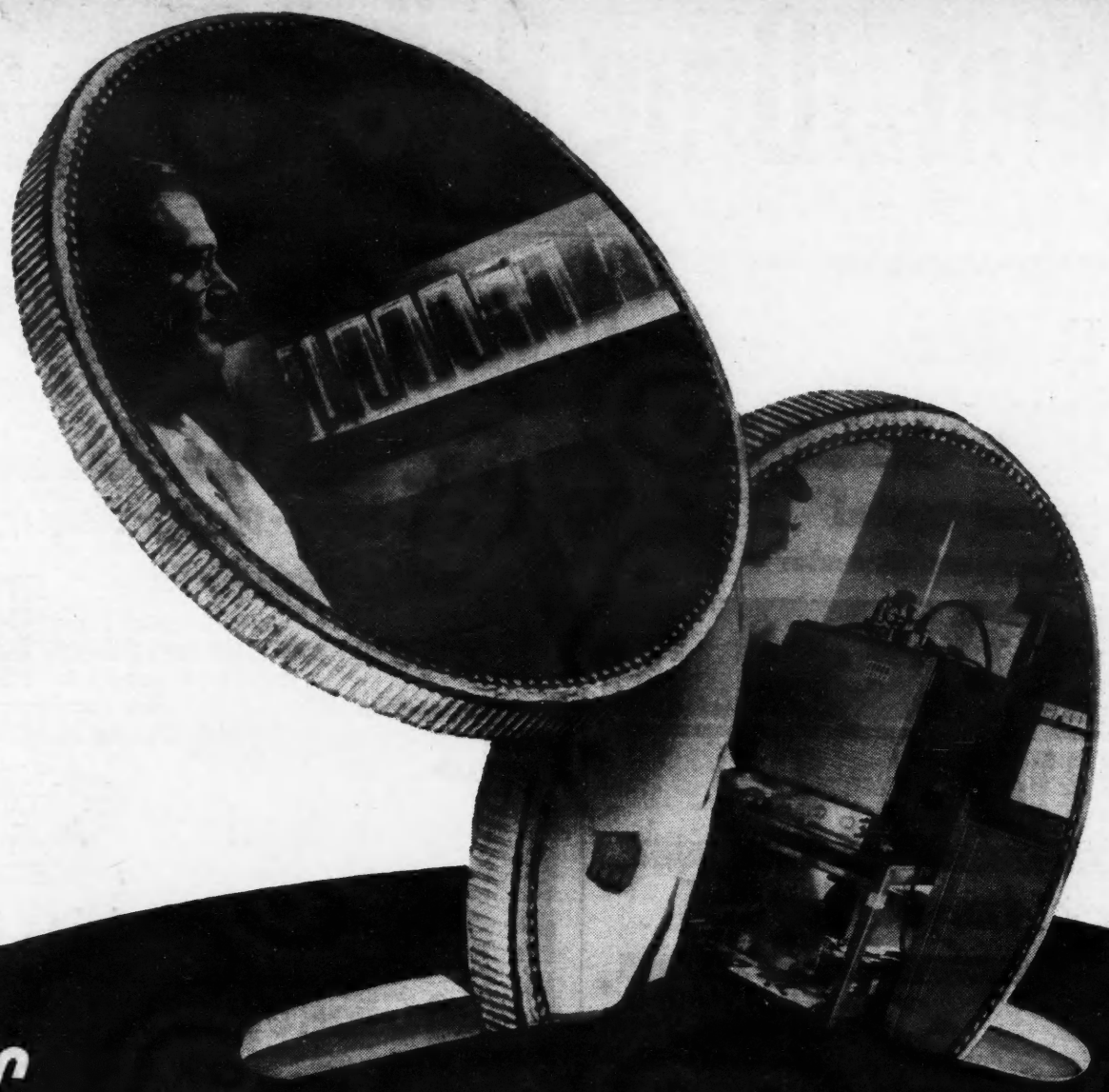

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PHOSPHORUS 1961 END-USES
Tripoly to Remain the Leader

Acid-Type Uses:	
Sodium Tripolyphosphate	150,000 tons
Tetrasodium Phosphate	25,000 tons
Sodium Metaphosphate	18,000 tons
Other Sodium Phosphates (1)	37,000 tons
Calcium Phosphates (2)	39,000 tons
Potasium Phosphates	2,700 tons
Miscellaneous (Mostly Fertilizer)	84,800 tons
Direct Uses:	
Phosphorus Pentoxide	5,500 tons
Phosphorus Pentasulfide	5,500 tons
Phosphorus Chlorides (3)	9,600 tons
Miscellaneous	8,900 tons
Total	386,000 tons

(1) Trisodium, 9,000 tons; disodium, 5,500 tons; acid pyro, 4,500 tons; monosodium and other, 18,500 tons
(2) Monocalcium, 8,000 tons; dicalcium, 30,000 tons; tricalcium, 1,000 tons.
(3) Trichloride, 5,000 tons; oxychloride, 4,600 tons.

Phosphorus Producers Add New Capacity Very Cautiously With 1965 Demand in Mind

Phosphorus producers, encouraged by the solid growth of their product over the last ten years, are carefully adding enough furnace capacity to cover their expected needs during the next five. By next January 1, more than 523,000 tons of capacity should be in place, up 95,500 tons from the 427,500 tons in place January 1, 1960. Since 1965 needs are anticipated at nearly 448,000 tons, the industry will be operating at 85 percent of capacity at that time, an achievement that may start another round of expansions.

OPD 'Depth' Report

Latest producer of elemental phosphorus to announce expansion plans is Hooker Chemical Corporation. The Niagara Falls, N. Y., firm is adding another furnace to its Columbia, Tenn., operation, which will increase capacity there to 68,500 tons a year by December.

Other Recent Expansions

Other recent expansions include:

- American Agricultural Chemical Company, which brought on stream a new furnace with an estimated capacity of 17,000 tons a year at Pierce, Fla., around January 1.
- Monsanto Chemical Company, whose Monsanto, Tenn., capacity was boosted to an estimated 110,000 tons per year. While the company won't estimate its capacity, outsiders indicate that kilowattage boosts at Soda Springs, Ida., have increased capacity by 10,000 tons a year there also.
- Victor Chemical Division of Stauffer Chemical Company, which now has a new 20,000-to-a-year furnace in operation at its Mount Pleasant, Tenn., location.

Of the other producers, the mineral products division of Food Machinery & Chemical Corporation expanded to its present 75,000-ton capacity in late 1959.

Virginia-Carolina Chemical Corporation, currently expanding in other directions (the company is spending $10 million on a 300,000-ton triple superphosphate unit, a 100,000-ton diammonium phosphate plant and a phosphate rock flotation operation), is content at present to leave its furnace capacity unchanged.

There's no word from Central Farmers Fertilizer Company or Tennessee Valley Authority as to whether further expansions are contemplated. It's believed more than likely Central Farmers' 21,000-ton furnace at Georgetown, Idaho, and TVA's five furnaces (36,000 tons a year) at Wilson Dam, Ala., will stay the same in the immediate future.

Since 1951 (when capacity was 161,000 tons), elemental phosphorus capacity has grown so that by 1962, some eleven years later, it will be almost three times what it was.

If capacity has tripled in a little more than a decade, why isn't everyone expanding? There are several reasons. For one thing, consumption of phosphorus for fertilizer manufacture, while it looks attractive on a volume basis, is not too enticing in terms of profit.

Tennessee Valley Authority, in particular, has been the champion of programs employing elemental phosphorus instead of wet-process phosphoric acid, or phosphate rock acidulated with sulfuric acid,

—Continued on page 34

P PRODUCTION

1965	*448,000 tons
1961	*386,000 tons
1960	*371,500 tons
1959	378,471 tons
1958	335,747 tons
1957	339,164 tons
1956	312,213 tons
1955	292,954 tons
1954	266,887 tons

*Estimate

Source: Bureau of Census

Styrene Eyes Its Growth Future And Finds the Chances Look Good

Paced by polystyrene and synthetic rubber outlets, the styrene business stands a good chance of hitting and holding on to a 5 percent growth rate over the next few years. But not all of tomorrow's news is good news. For David L. Eynon, jr., vice-president and general manager of the plastics division of Koppers Company, the threat of severe price competition hangs heavy over the market—as real a possibility as the 5 percent growth rate. Summing up styrene's outlook for the American Coke & Coal Chemicals Institute in Chicago last week, Mr. Eynon made these entries on both sides of the ledger, and left the final decision to his audience.

IN NEW POST: E. R. Baker, promoted to general manager of the research and development department of Continental Oil Company, Houston, Tex. He retains his old post as general manager of the petrochemical department.

Styrene End-Uses in 1960

Rubber	500 million lbs.
*Polystyrene Resins	835 million lbs.
Coatings (all types)	95 million lbs.
Polyester Resins	50 million lbs.
Miscellaneous & Export	220 million lbs.
Total	1,700 million lbs.

*Includes expandable resins.
Above total includes styrene used in ion-exchange resins, styrenated unsaturated oils, antioxidants, etc.

With new producers scheduling their styrene debuts, Mr. Eynon said, the resulting pressure on prices will not go unfelt.

"It is not practical for most of the new producers to integrate into the polystyrene or any of the other styrene fields

—Continued on page 39

Ethylene Production: Enjay Aiming Higher

Enjay Chemical Company is going to expand ethylene producing capacity by 35 percent at its Bayway (N. J.) refinery, thus putting the facility into a yearly production bracket of 175 million pounds.

New York-based Enjay, a division of Humble Oil & Refining Company, expects the expansion will be completed by the end of next year's second quarter.

The increase will raise Enjay's overall ethylene producing capacity to approximately 845 million pounds a year, about 250 million pounds of which are consumed internally.

Preliminary construction work for the Bayway project is now under way, Enjay reports, adding that its parent company is already a producer of ethylene at two

—Continued on page 39

Oxo, a Newcomer, Is Taking to Alcohol

Oxo Chemicals Company, a relative newcomer on the scene, is going ahead full steam with plans to build a multi-million pound per year iso-octyl and decyl alcohol plant at Haverhill, Ohio.

Says Jay H. Forrester, company president: "Construction will be started this spring, with completion scheduled for early 1962. The plant is designed to use

—Continued on page 53

Polyolefins Agreement Set Between Carbide Unit, Shell

Union Carbide Plastics Company and Shell Chemical Company have set up a joint polyethylene-polypropylene venture. Under contract signed by the two companies, UCC will make polyethylene for Shell and Shell will make polypropylene resins for Carbide—each to the other's specifications.

As a result of their working arrangement, polyethylene compounds will be available for Shell soon, while polypropylene will be offered by both companies when Shell's polypropylene plant comes on stream in mid-1962. It's likely that experimental quantities of polypropylene will be available earlier.

HEADS R&D: Dr. Walter H. C. Rueggeberg, appointed to the newly-created position of research and development director for Atlas Powder Company, Wilmington, Del. He joined Atlas in 1955 as director of chemical research.

HR 3980: The Tag for Food Additives Extension Bill

The bill drawn up by the Food & Drug Administration to extend the effective date of the food additives law beyond the March 6 deadline has been introduced in the house.

Rep. Oren Harris of Arkansas, chairman of the house commerce committee, dropped the bill in the hopper last week and it now carries the identifying tag HR 3980.

In the form in which it was submitted, the bill is identical with that sent up to Speaker Rayburn by former Secretary of Health, Education & Welfare Arthur S. Flemming and later endorsed by Abraham Ribicoff, the present HEW Secretary.

But there are good prospects that an important change will be made in its provisions to make it conform to an agreement reached between industry and the FDA before it is reported for passage.

The bill authorizes the secretary to extend the effective date of the law in the case of any additive presently in use and under an extension on which work had been started prior to March 6, 1960 to develop scientific data relative to its safety, or to determine the applicability to the food additives law.

It is understood that FDA will offer a change in the language of the bill so that an extension will also be granted in the case of any additive now in use for which an application for an extension has been made prior to March 6, 1961—the deadline date.

Introduction of the bill by Mr. Harris relieves chemical and food processors of some of the anxiety they have been experiencing over the approaching deadline date, but it is still touch-and-go whether

—Continued on page 64

Nitrogen Is Wearing Two Looks: One for Laymen, One for Pros

Laymen see it as over-expansion, but the pros knows it for bad timing and poor locations. That is the situation in nitrogen right now, says Norman E. Hathaway, who, as executive vice-president of the nitrogen division of Allied Chemical Corporation, New York, can easily wear the mantle of a pro. Says he: The midwest offers a good example of expansion without regard to preliminary research; some of its states are producing more nitrogen than they can use; and, on top of that, some which are already clogged with over-production are even bringing in material from the outside.

Calling his shots, Mr. Hathaway told his listeners at last week's regional meeting of the American Coke & Coal Chemicals Institute in Chicago:

"The midwestern area of Nebraska, Iowa, Missouri and Oklahoma is a case in point of expansion of new facilities without too much regard for proper market research.

New Facilities, New Production

"There have been new nitrogen facilities announced or built during the past two years at Joplin, Mo.; Lawrence, Kan.; Fort Madison, Iowa, and Hastings, Neb., resulting in a production in these four states in 1961 of 628,000 tons vs. a consumption of 413,000 tons in 1960."

Then, touching on another phase of the same situation Mr. Hathaway went on to say:

"The difficulty lies in the origin points of supply during 1960. Shipments were made into Nebraska and Iowa from Texas, Arkansas, Canada and Alabama, to name a few. The sharp disruption of previous channels of supply during 1962 will present an extremely difficult marketing position.

Mr. Hathaway also had a few things to say about the fluctuating price situation. These were his comments:

"Nitrogen is one of the few chemicals that in the past few years had had a fluctuating seasonal price. Of the components of fertilizer, during 1960 it was the only one. Sulfuric acid, potash, phosphorus—all were on a constant basis.

"Why not nitrogen?

"The easiest way to achieve this is through larger producer-owned storage

—Continued on page 65

'Amprol' Expansion Isn't Chicken Feed

A 50 percent expansion in production is not chicken feed, as far as Merck & Co. is concerned, even though the expansion is for "Amprol," a coccidiostat used in chicken feed.

The expansion program will start immediately at the company's Elkton Va., plant and is necessitated by the increasing popularity of the new feed supplement, the Rahway, N. J., company says.

"Amprol" is marketed abroad by Merck, Sharp & Dohme International. It was introduced in this country in October and received Food & Drug Administration clearance in November.

Cellophane: It's Old, But Doesn't Show It

Cellophane, oldest of the transparent films, continues to move like a stripling in the marketplace, running neck and neck with its relatively new plastic competitors. In 1960, some 439 million pounds of the versatile film were sold, an all-time record and the third such record in a row.

In addition, according to an estimate by E. I. duPont de Nemours & Co., 3 million pounds of imported cellophane were sold, representing a major increase over previous years.

Sales gains were made in the face of continuing challenges from other transparent packaging materials which offered

—Continued on page 44

Rayon-Nylon Tire Battle: 'Tyrex' User to Foot Bill

The rayon tire cord industry is passing along to consumers the cost of waging its war on the nylon tire yarn producers. Latest to advance "Tyrex" prices on 1,100 and 1,650-denier high-tenacity rayon yarn is E. I. duPont de Nemours & Co., Wilmington, Del. The advance amounts to 2 cents a pound.

Earlier, Beaunit Mills, Inc., had boosted prices on the same weight yarn by the same amount. Beaunit president, I. Rogosin, went on record as saying that

—Continued on page 41

Kyanite, Mullite, Graphite: Who Will Start the Bidding?

General Services Administration has issued separate invitations to bid on three stockpile items—kyanite, mullite and graphite—which are no longer needed for defense purposes.

Available for sale under the invitations are 1,627 short tons of Kenya kyanite ore, 986 short tons of sintered synthetic mullite and 740 short tons of graphite. Twenty-eight short tons of the graphite is Ceylon amorphous lump; the balance is crystalline flake.

Bids may be submitted for all or part of the quantities of each item. Awards may be made for as little as five short tons for the graphite and fifty short tons for the Kenya kyanite ore and the sintered synthetic mullite.

All three materials are being offered

—Continued on page 56

The Week's Price Changes

Coconut Oil, Copra, Lard, Peanut Oil, Tung Oil Advanced. Germanium Oil, Linseed Meal, Mercury, Zinc Oxide Reduced.

Prices Advanced

Coconut oil, Pac. coast, ½c. per lb. (p. 54).
Copra, $2.50 per ton (p. 54).
Cottonseed oil, crude, ¼c. per lb. (p. 54).
Refd., ¼c. per lb. (p. 54).
Greases, ¼c. per lb. (p. 54).
Lard, cash, 3/5c. per lb. (p. 54).
Peanut meal, $1 per ton (p. 54).
Peanut oil, crude, ¼c. per lb. (p. 54).
Refd., ¼c. per lb. (p. 54).
Rapeseed oil, ½c. per lb. (p. 54).
Soybean oil, crude, ¼c. per lb. (p. 54).
Refd., ¼c. per lb. (p. 54).
Tallow, edible, ½c. per lb. (p. 54).
Inedible, ¼c. per lb. (p. 54).
Tung oil, 1½c. to 2c. per lb. (p. 54).

Prices Reduced

Cottonseed meal, $1 per ton (p. 54).
Geranium oil, Algerian, $3 per lb. (p. 50).
Bourbon, $2 per lb. (p. 50).
Linseed meal, 50c. per ton (p. 54).
Mercury, $1 per flask (p. 35).
Zinc oxide, 2c. per lb. (p. 58).

OPD Price Index

THE OIL, PAINT AND DRUG REPORTER'S relative record of prices of chemicals and related materials is currently as follows:

(100=1949 average)

Feb. 10, 1961	Feb. 3, 1961	Feb. 12, 1960
110.72	110.66	111.48

'Delrin': It's Growing Stronger

"Delrin," E. I. duPont de Nemours & Co.'s $50 million challenge to the metals industry, is growing even stronger to support its invasion of metals markets. DuPont says it is cutting the resin (polyformaldehyde) from 80 cents to 65 cents a pound on March 7. At the new level, the company points out, "Delrin" will be underselling zinc for the first time on a cubic inch basis. Although the $50 million investment total is the only figure duPont will give on its "Delrin" stake, market researchers have estimated the current sales volume at around $12 million.

Together with the company's statement that "Delrin" should "grow several-fold in the next five years," this means a 1965 sales target in the neighborhood of $50 million.

A Glance Tells a Story

A glance at the more than 500 commercial products made from "Delrin"—200 of them were exhibited in New York last week—gives some indication of why duPont must "widen markets even further and develop new applications" to reach a paying tonnage. Most require only small quantities of material.

Along these lines, a company official points out, sales of one million pounds of "Delrin" would involve 190,000 instrument clusters (of the Valiant type), 2.6 million pounds of corn planter sprockets, 231 million garment buckles, 7.5 million

—Continued on page 59

Amoco Is Now On Stream At New Polybutene Facility

Amoco Chemicals Corporation has completed trial runs and is now fully on stream at a new polybutene plant in Chicago. The company, headquartered in that city, is offering the material in ten viscosity grades between 40 and 20,500 SSU at 210 degrees Fahrenheit.

The new facilities, expanding Amoco's "Indopol" capacity by 60 percent, are expected to cover consuming demands for the next five to ten years, according to company officials. The products are also turned out at Yorktown, Va., and Eldorado, Ark.

ASSUMES SALES JOB: Harold E. Abbott, named sales manager in the packaged detergents division of Ultra Chemical Works, Inc., Paterson, N.J., a division of Witco Chemical Company.

GE Reduces Silicones

General Electric Company, Waterford, N. Y., has posted a price reduction on single-drum quantities of silicone fluids of about $22 a drum. The new price, approximately $1,227 a drum, is equivalent to that prevailing for larger drum quantities, GE points out. The reduction was attributed to expanded use.

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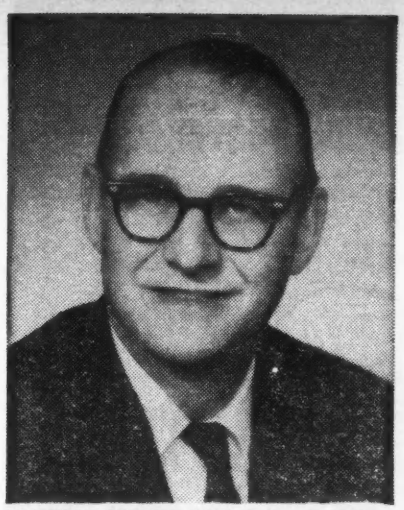

IN NEWLY-CREATED POST: Robert E. Widing, appointed to the new position of manager of manufacturing for the chemical division of of Pittsburgh Plate Glass Company, Pittsburgh, Pa. He had been assistant works manager of the Barberton, Ohio, plant.

Acrylate Ester Field: Celanese Is Growing

Celanese Chemical Company has just become a much bigger factor in acrylate esters. How? Through the just-announced completion of a multi-million-dollar expansion program that almost doubles the capacity at Pampa, Tex.

The producer, a division of Celanese Corporation of America, New York, says the newly-completed facilities at Pampa are designed for annual production of 14 million pounds of butyl and 2-ethylhexyl acrylates and glacial acrylic acid.

Including earlier units for making methyl and ethyl acrylates, the Pampa plant now has an overall acrylate capacity of 30 million pounds per year.

The glacial acrylic acid is produced by a new Celanese process and has a purity level in excess of 98 percent. It is being sold to outside customers, as well as being used in the new units for making acrylates by an improved process based on the sole use of Celanese raw material chemicals.

Celanese is one of the world's largest producers of acetyls, from which acrylate esters are made. The company makes the chemicals from petroleum resources at plants in Pampa and Bishop, Tex. It recently announced plans for another major petrochemicals plant which will use a new European process for the manufacture of acetyls. The plant will be built near Bay City, Tex. (OPD, 1/30/61).

Other acetyl chemicals made at Pampa include acetic acid, acetic anhydride and vinyl acetate.

Overall usage of acrylates by US industry has doubled in the last four years and is expected to reach 70 million pounds during 1961, Celanese points out.

Carbon Black Plant Site Acquired in Los Angeles

United Carbon Company, Houston, Tex., has purchased a forty-five-acre tract north of Los Angeles as the site for a new 64-million-pounds-per-year carbon black plant. Construction is scheduled for completion within ten months and production is expected by late 1961.

Explaining the site selection, an official of United Carbon points out that more tires are sold in Los Angeles County alone than in any one of forty-four states in the country. The plant has been designed for rapid expansion to handle the increasing need of this area.

OPD Reports from Europe

British Are Leading Parade Of European Producers to Tap Soviet Chemical Technology

While the US chemical industry continues to debate the wisdom of doing any business at all with Communist countries, Europe's chemical concerns have passed that hurdle and gone charging on to the next jump—licensing products and processes developed by the Iron Curtain state industries and laboratories. So far, the British companies seem to be leading this attempt to tap Communist chemical technology. Here are a few of the steps that the English have already taken:

- Distillers Company, Ltd's biochemicals division has signed an agreement with a Czechoslovakian pharmaceutical organization covering an anti-leukemia drug.
- Humphreys & Glasgow, Ltd., an international engineering company, has completed a chemical process "know-how" exchange agreement with Limex, the East German state trading corporation.
- Giant Imperial Chemical Industries, Ltd., is investigating the economics and engineering of a whole series of Soviet processes.

English Don't Under-Rate Reds

Reports in the US of lags in Communist chemical science, especially in organic chemistry, do not much impress these firms. While the West obviously has many processes the Iron Curtain countries are interested in, these firms believe there are probably many Communist-developed technics that could benefit Western chemical companies.

Distillers' biochemicals division is treating the anti-leukemia drug very cautiously and refuses to disclose the chemical involved or the type of therapeutic action.

The new drug "appears to possess remarkable characteristics including some properties which may be of help in the treatment of certain types of leukemia," the firm says.

About the drug itself, Distillers will only add that it is produced by a fermentation process, a field in which Distillers has had considerable experience.

"The research is only at an early stage," Distillers says, adding it has "no intention of marketing the drug either directly or through any other organization until it has been thoroughly tested."

There has been speculation that the Czech drug is an antibiotic offshoot. A number of drugs produced from antibiotics are known to have shown some anti-leukemia activity in the massive chemical

—Continued on page 38

Korea and Iran Request Fertilizer Bids in the US

Invitations have been sent out by the Bank of Korea of intentions to purchase about $7,640,000 of ammonium sulfate and about $100,000 of ammonium phosphate under sealed bids to be received until 10 a.m. Seoul time, February 16.

Allocations have been made to individual importers for purchase of the fertilizers. These purchases are to be in addition to the 66,900 tons of nitrogen fertilizers on which bids were received earlier in the month by the Korean government.

In a related development, Chemical Bongah, the agricultural procurement department of Iran's Ministry of Agriculture, has asked price quotations from US producers, c.&f. Khorranshahr, on substantial amounts of superphosphate, 48 percent; and potassium sulfate, 50 and 52 percent.

Quotations should be addressed to the director, Chemical Bongah, Engineer SHOAI, Tehran, Iran.

PROMOTED: Dr. Henry C. Marks, made director of research for all company divisions by Wallace & Tiernan Inc., Belleville, N.J. He had been director of research for the chemical and pharmaceutical divisions in Belleville.

Miles Wants Research Back Home in Elkhart

Miles Chemical Company is planning to make its home town, Elkhart, Ind., the base for research in enzymes, bulk chemicals and fermentation products. With centralization the aim, the company is planning to construct two pilot plants in Elkhart at a cost of $650,000.

Heretofore, pilot plant operations have been carried on at the company's Takamine plant in Clifton, N. J., and at the Sumner plant in Zeeland, Mich. Those studies will be transferred when the new facilities are available in Elkhart. Full commercial production at both plants will be continued without interruption.

The two pilot plants will concentrate on specific divisional biological fermentation and chemical research programs, as well as providing services for other divisions of the parent firm, Miles Laboratories, Inc.

Pfizer Buys Into Company Exploiting Italian Itaconic

Chas. Pfizer & Co.'s foreign subsidiary, Pfizer Corporation, has acquired a one-third interest in Laboratori Italiana di Ricerca Chimica SpA (LIRC), Milano, Italy.

The other two owners of LIRC, which was set up in 1956 to research and develop itaconic acids, are Snia Viscosa SpA and Ledoga SpA. The company will operate world-wide with Pfizer handling promotion and licensing of LIRC developments in the US.

Reinforced Plastic Sales in 1961 Seen At All-Time High

Record sales of 271 million pounds, 7 percent more than 1960's 255 million pounds and 2 percent above the previous all-time high (1959: 264 million pounds). That's what Samuel A. Moore of Interchemical Corporation sees for reinforced plastics this year.

Occasion for this glowing prediction: the annual exhibit and conference of the Reinforced Plastics Division of the Society of Plastics Industry in Chicago last week.

Mr. Moore, who is general chairman of the SPI division, expects plastics makers to rebound vigorously from the slight dip in 1960.

Reinforced Plastics: End-Uses

	1961	1960
	(Millions of Pounds)	
Aircraft, Missiles	30.25	29.50
Appliances	10.50	10.25
Boats	58.75	56.00
Construction	50.50	44.00
Consumer Items	24.25	24.00
Containers, Trays, Industrial Housing	11.00	10.50
Electrical	12.75	12.25
Pipe, Ducts, Tanks	11.50	11.50
Transportation	50.00	45.50
Miscellaneous	11.50	11.50
Total	271.00	255.00

He points out that last year's business slippage was a reflection of the general economic decline and of internal readjustments within the industry.

This year, he expects reinforced plastics to make major gains in two key end-uses: construction and transportation.

Boats, a disappointment in '60, should be up, too. Other outlets, he feels, should be slightly higher or hold their own.

If '61 looks good, consider what the prospects are for 1965. Clare E. Bacon of Owens-Corning Fiberglas Corporation predicts that production of reinforced plastics, which has more than doubled since 1955, will double again by '65.

Mr. Bacon points to transportation as one of the fastest-growing markets for these plastics. His 1965 forecast for this

—Continued on page 41

Chemicals Foreign Trade At Record Heights in '60

Foreign trade in chemicals and related products reached new record heights last year, surpassing the $2 billion mark for the first time as a result of a substantial rise in export of the industry's products, while imports were recording a more moderate advance.

According to preliminary estimates of the Bureau of the Census, the total of two-way trade for 1960 was $2,038.2 million. This compares with $1,845.7 million in 1959 and $1,646.1 million in 1958.

Exports, the biggest factor in the total since they run in excess of four times the imports, amounted to $1,682.2 million for the year, an increase of $185.9 million over those of 1959. Imports reached a new high of $356 million, compared with $349.4 million a year earlier.

December trade was up from the November level in both exports and imports of chemicals. In the case of exports, the total for the month was $140.3 million,

—Continued on page 64

Epoxy Chemicals Line Is Planned by Heyden

Heyden Newport Chemical Corporation has disclosed the next target in its specialty product program. With an eye on the 15 percent growth date of the epoxy resin market, the New York-based company has decided to add a line of companion epoxy chemicals.

Initially the line will include liquid and resinous curing agents for epoxies, and viscosity modifiers. Other products will be added later. All will be made available from the Heyden Chemical Division plant in Garfield, N. J.

Drugs for the Needy: Merck, Squibb Have a Plan

Merck Sharp & Dohme, a division of Merck & Co., has offered to the states a plan granting 10 percent rebates on welfare prescriptions filled in private pharmacies.

The proposal, seconded late last week by a similar offer from E. R. Squibb & Sons, in effect extends to the retail level the discounts offered to cities, counties and states on bulk drug purchases.

A spokesman for Merck, Sharp & Dohme says the company has long been interested in finding a way to help states reduce the cost of retailer-filled prescriptions for welfare patients.

But he emphasizes that the proposal should also help individual pharmacists by encouraging programs under which prescriptions are filled in this customary manner.

States eligible for the 10 percent reimbursement are those having programs which meet the full cost of prescriptions filled privately for welfare patients.

Out of the fifty states, forty-three are now eligible and, according to Merck, there are indications that more states will adopt similar qualifying programs.

To receive the rebate, states would simply have to furnish the company with a verifiable monthly statement of the welfare dollars spent on MSD products in private pharmacies.

Citing precedents for such assistance to the states, Merck's spokesman notes that, according to survey results, it is common practice for physicians to reduce fees for welfare partients. Similarly, he points out, pharmacists in most states have a schedule for welfare prescriptions lower than those for non-welfare prescriptions.

Following the announcement by Squibb, offering a similar plan, a check with the drug trade revealed that other companies were also giving the plan full consideration.

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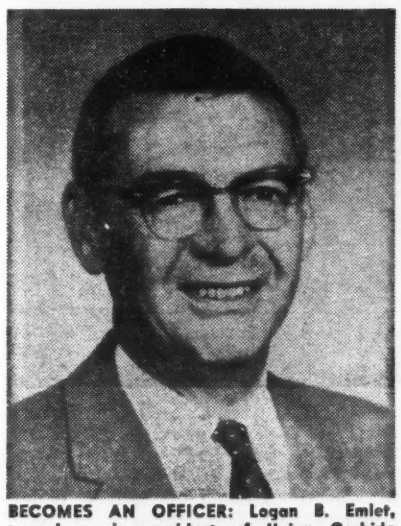
OPD REPORTS ON DYESTUFFS
How Business Is Shaping Up

	Fourth Quarter Sales, 1960
Acid Dyes	$5,081,639
Basic Dyes	2,743,761
Mordant Dyes	670,768
Solvent Dyes	1,534,582
Vat Dyes	9,278,985
Total	$19,309,735

OPD's report of sales value is based on figures supplied by producers representing more than 80 percent of domestic output of the above dyestuff classes. The figure for acid dyes includes pre-metallized dyestuffs.

Copper Refining Process Is Cheap, But There Are Clouds in Its Future

A new chemical process for refining copper, soon to be introduced at a $23 million plant in the Philippines, may very well have a future in the US, but it's a future clouded right now by two significant factors. First, oversupply of copper, which rules out any expansion drive in this country even though the cost of the chemical installation is said to be 40 percent less than for a convention smelting plant. And, second, the economy of the new process depends upon finding markets for a substantial byproduct output of ammonium sulfate, and such markets, as cokeoven operators will testify, are no longer so easy to come by.



BECOMES AN OFFICER: Logan B. Emlet, named a vice-president of Union Carbide Nuclear Company, a division of Union Carbide Corporation. He will headquarter in New York.

What Plant Will Produce

Along with 14,000 tons a year of fabricated copper products, the proposed Philippine plant will turn out some 100,000 tons of ammonium sulfate and about 5,000 tons of zinc. Now an importer of fertilizer materials, the Philippines should easily absorb the sulfate output in its sugar and rice industry.

An official of Chemetals Corporation, which holds exclusive Free World rights to license the process, places the cost of processing copper concentrates to strip at about 5 cents a pound, as against an estimated 10½ cents in the standard electrolytic process.

In addition, the capital cost of facil-

—Continued on page 59

CSMA Fixes Meeting Date

Chemical Specialties Manufacturers Association will hold its 1961 midyear meeting May 15 to 17 at the Drake hotel, Chicago.

Korean Chemical Maker To Construct PVC Plant

Puk Sam Chemical Industry Company, a privately-owned firm in Korea, has secured a $3.3 million loan from the Development Loan Fund for construction of a polyvinyl chloride facility.

Blaw-Knox Company, a US-based firm, is expected to provide engineering, construction supervision and procurement for the project. All DLF funds will be used to buy American equipment, according to a report from the Department of Commerce.

Chemical People a Little Wary Of New FTC-er, Paul Dixon, An Old Kefauver Hatchet Man

Pricing practices and merger maneuverings in the drug and allied chemical products industries may be heading for a period of even rougher weather at the government's hands than was experienced under the record-setting anti-trust enforcement pace of the Eisenhower administration. The explanation lies in the selection of Paul Rand Dixon, chief counsel to the Kefauver Committee, to guide the work of the Federal Trade Commission in the Kennedy administration. And indications are that the President may even be searching around for an equally dominant figure to head up the trust-busting activities of the Department of Justice.

Mr. Dixon's appointment to the FTC, whence he had been plucked four years ago to run the monopoly investigations of the Kefauver group, and his selection by President Kennedy to serve as chairman, was announced by the White House last week.

Another Post to Justice Elman

Philip Elman, currently assistant to the Solicitor General in the Justice Department, was named at the same time to fill another vacancy on the commission.

In a further announcement calculated to instill even less of a feeling of confidence among big business in its future dealings with the government, the White House also said that the President plans to appoint the general counsel of the house small business committee, A. Everett MacIntyre, to the next vacancy that turns up on the commission.

There are reports that Mr. Dixon may run into Republican objections when his name comes before the senate for confirmation, but they could not be confirmed immediately.

In any event, it appears extremely doubtful to observers that opposition will be of such proportions as to block the appointment. The nomination will go before the senate commerce committee for hearings before coming before the senate for approval.

Mr. Dixon became a well-known figure to the chemical industry when the Kefauver committee launched its probe of the drug producers almost two years ago.

Throughout the entire investigation, which is yet to be completed, Mr. Dixon

—Continued on page 65

IN TOP RESEARCH POST: Dr. William S. Bittenbender, made corporate director of research for Glidden Company, Cleveland, Ohio. He will be senior technical executive and will head up research for the three main operating divisions.

Strong Cobb Arner Opens Expanded New Jersey Unit

Strong Cobb Arner, Inc.—which lays claim to being the nation's largest custom pharmaceutical manufacturer—last week opened an expanded plant at Murray Hill, N. J., which doubles its manufacturing and laboratory facilities there.

Included in the $500,000 expansion are modern pharmacy, mixing, blending and tablet compression equipment; high-speed packaging lines, and the latest processed atmosphere control systems.

With its new 70,000-square-foot installation at Murray Hill, Strong Cobb Arner now has three enlarged plants, which compares with six operating units a year ago.

The company also has facilities in Cleveland, Ohio, and at Fort Erie, Canada, and in addition operates Rawson Drug & Sundry Company, Oakland, Calif., a major service merchandiser.

Chemical Mergers On Toboggan Slide?

Is the merger trend in the chemical industry starting down the toboggan slide? So says information coming through from the Federal Trade Commission. In a whole year of searching, FTC says it was able to come up with only fifty-nine acquisitions for 1960. This compares to sixty-two for the year before.

To show how merger figures had shot up in a three-year period, FTC revealed figures for 1958, when the total had been a mere forty-one.

The data were gathered by the commission from selected trade and daily newspapers and two business publications, *Moody's Industrials* and *Standard Corporation Records*, and the commission makes no claims as to their completeness.

Also, the commission carefully adds, the tabulations are made for the purpose solely of following the trend in the merger movement. Therefore they should not be considered as firm figures on completed mergers.

Nor should they be thought of as comprising all acquisitions that might have been under negotiation during 1960.

By manufacturing groups, there was only a slight difference in number be-

—Continued on page 58

Association Meetings

ACHEMA 1961, German chemical engineering exposition and congress, Frankfurt am Maim, Germany, June 9-17.

American Chemical Society, national meeting, St. Louis, Mo., March 21-30.

American Institute of Chemical Engineers, annual meeting and petrochemical exposition, Roosevelt hotel and Municipal Auditorium, New Orleans, La., February 25-March 1.

American Paper & Pulp Association, annual meeting, Waldorf-Astoria hotel, New York, February 19-23.

American Pharmaceutical Association, annual convention, Sherman hotel, Chicago, April 23-28.

American Society of Perfumers, annual symposium, Essex House, New York, April 13.

Animal Health Institute, annual meeting, Mayflower hotel, Washington, April 24-26.

Chemical Market Research Association, Shoreham hotel, Washington, D. C., February 15-17.

Chemical Specialties Manufacturers Association, midyear meeting, Drake hotel, Chicago, May 15-17.

Chemurgic Council, annual conference, Sheraton-Gibson hotel, Cincinnati, Ohio, April 12-14.

Commercial Chemical Development Association, annual meeting, Roosevelt hotel, New York, March 15-16; annual outing, Bedford Springs hotel, Bedford Springs, Pa., May 24-25.

Drug, Chemical & Allied Trades Association, all-day symposium and annual banquet, Waldorf-Astoria hotel, New York, March 2.

Electrochemical Society, Claypool hotel, Indianapolis, Ind., April 30-May 4.

Federal Wholesale Druggists' Association, mid-year meeting, Statler-Hilton hotel, New York, March 2-3.

Federation of Societies for Paint Technology, annual meeting, Shoreham and Sheraton-Park hotels, Washington, November 2-4.

Flavoring Extract Manufacturers Association, annual meeting, Savoy-Hilton hotel, New York, May 14-17.

Manufacturing Chemists' Association, annual meeting, Greenbrier hotel, White Sulphur Springs, W. Va., June 8-10.

National Agricultural Chemicals Association, annual meeting, Homestead, Hot Springs, Va., October 29-November 1.

National Paint, Varnish & Lacquer Association annual meeting, Statler-Hilton hotel, Washington, October 30-November 1.

National Plant Food Institute, annual meeting, Greenbrier hotel, White Sulphur Springs, W. Va., June 11-14.

Pharmaceutical Manufacturers Association, central regional meeting, Edgewater Beach hotel, Chicago, February 13-15.

Pharmaceutical Manufacturers Association, western regional meeting, Ambassador hotel, Los Angeles, February 20-21; annual meeting, Greenbrier hotel, White Sulphur Springs, W. Va., April 30-May 3.

Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Penn-Sheraton hotel, Pittsburgh, Pa., February 27-March 3.

Plastics Exposition, sponsored by the Society of the Plastics Industry, Coliseum, New York, June 5-9.

Society of the Plastics Industry, western section conference, del Coronado hotel, Coronado, Calif., April 20-21; national conference, Commodore hotel, New York, June 5-9.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meeting, Roosevelt hotel, New York, February 16.

Technical Association of the Pulp & Paper Industry, annual meeting Commodore hotel, New York, February 20-23.

Toilet Goods Association, annual convention, Waldorf-Astoria hotel, New York, May 9-11.

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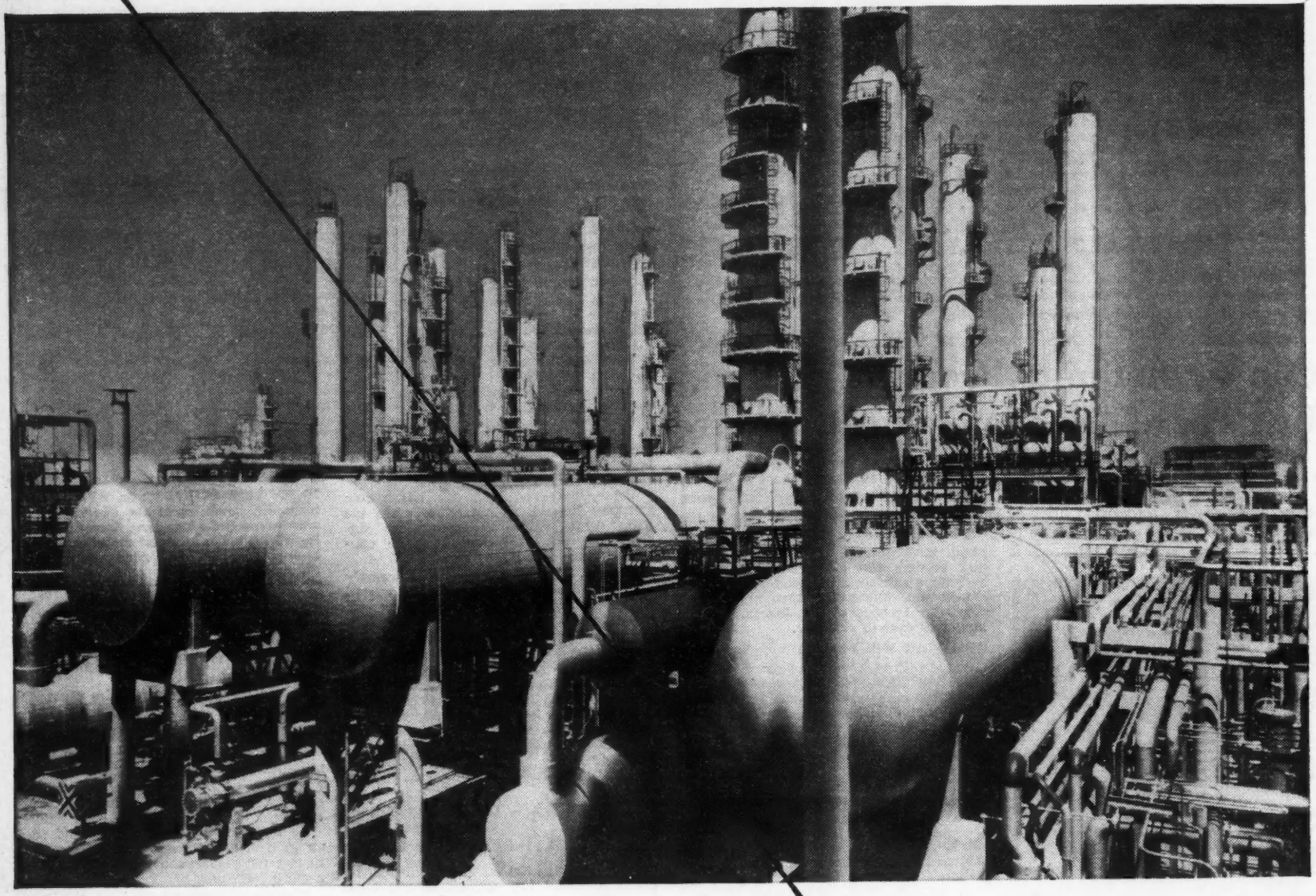

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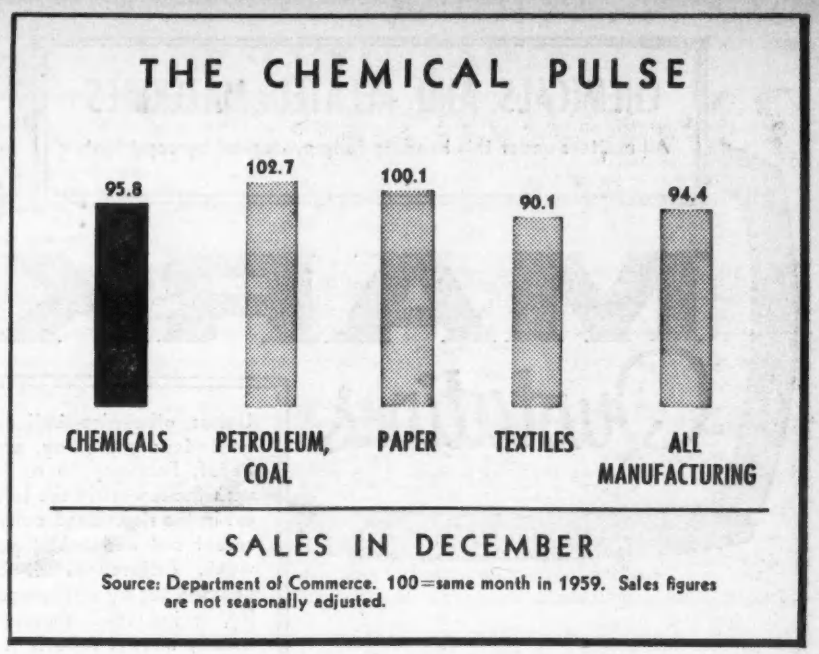

Foreign Relations Plans

Foreign relations of the United States —and of its people—are getting a good deal of attention with a variety of objectives, from many angles, and in a complexity of political, technological, commercial, social, and cultural areas. Among the consequences is a recommendation by a senate subcommittee that the Secretary of State be given more power and authority—but required to do less work, passing much of the customary international diplomatic intermingling down to lesser officials in his department and its staffs. The recommendation does not in any way touch upon what is the real need—the creation of a foreign ministry with adequate facilities for the effective training of foreign relations personnel at all its many levels—and effective regulative supervision of all the activities of everybody at every level and location.

That is one variously evaluated aspect of the planning. Another is presented in the endeavor by the President to keep the international monetary record of the United States in black ink. Somewhat teamed up with that endeavor is the omnibus trade bill of recent senate introduction, designed, at least pronouncedly, to boost exports from this country and provide federal aid for domestic industries, communities, and individuals "harmed by foreign imports." World competition has been and is being given extensive promotion by way of the revitalization of industry, finance, and commerce throughout Western Europe. But, in the judgment of competent analysts, there is no reason to expect a repressive reaction in the role of the United States in world markets.

On the basis of a study made under the supervision of its economic advisory committee, the National Association of Manufacturers has declared that "if the United States pursues a sound economic policy at home, the industrial resurgence of other nations will be beneficial, rather than destructive, to the American economy . . . and should be regarded as a challenge, rather than a disaster—a challenge to show the good sense to do the things we ought to be doing anyway."

Matching Outgo and Output

What was said here several months ago on "Selling Will Count" (November 7) and "It's Distribution That Pays" (December 19) has been given a large measure of particular pertinence by two AP news items that came from Detroit during the last week in January. The first, dated January 23, started off by saying: "The nation's auto makers are still scrambling to cut production to meet the slow sales pace of January." The second, dated January 30, told that the industry "prepared today one-week layoffs of nearly 80,000 men in slicing production to balance with unsold 1961 new model cars"—said to number more than a million.

Although the first item was headed "Auto Makers Try to Match Sales, Output" in a New York newspaper, there was nothing in either item to indicate that sales promotion was going to have any part in the matching endeavor. Further piling up of inventories was to be, at least, eased by a week's "rest"; but there was no indication that there was to be any endeavor to cut down what had been piled up. One "excuse" for that may be found in the fact that the unsold cars are in the hands of dealers—and in all industrial-commercial hookups, passing the buck is the all-too-common practice in such situations.

The president of a large department store company, addressing the Newspaper Advertising Executives Association January 16, called for greater cooperation on the part of manufacturers, retailers, and newspaper advertising managers to keep retail prices and costs of distribution down; and getting down to what was said here in November and December, he earnestly suggested that manufacturers might well re-examine their distribution methods, including their advertising programs, with a realization that nothing is sold until it has passed out of the retailer's hands.

Problems in Africa

The biggest question in international puzzling today is: What is the "New Africa" and what is it going to be — when? Also getting attention are Will there be a United States of Africa? If so, will it be democratic or communistic?

Most of the international interest in and puzzling over Africa currently has to do with the Congo—as one thing or another. The United Nations looms large and variously in that connection. Reduced to actualities its role is an indefinite one. The recent declaration by the US Secretary of State that the Congolese should—must—be permitted, perhaps assisted, to work out their own form and processes of government must be regarded, possibly accepted, as a matter of hope, rather than a matter of faith. The Soviets have strong thoughts and desires in that regard—and they are not at all in keeping with any in a democratic category. That is one reason why it is difficult, yes, impossible, to forecast what might or even could result from the decision in Washington to let the Soviets go pretty well along with their purpose to patch up the splits among the Congolese factions—with favors for their favorites who are belligerently combatting every UN peace move.

The Congo, however it may be defined in area, is not the whole of "New Africa." Its relations with other members of that community, insofar as can be judged from the limited mostly unreliable and quite confusing "information" that is available, are no better in any respect than are those among its any factions. Some knowledge of its external relations may come to this country in connection with the plan of the federal administration to send 150 young teachers to the British territories in East Africa.

The biggest problem having to do with Africa—whatever may be its transition from old to new—is that of the proper development of its natural resources, with particular reference to the promotion of its potentialities for the providing of adequate food for its poorly nourished people. That is a job for technology and industry—not for ideology. It can be a good-paying job. But, it cannot be jumped into or grabbed up. It calls for a deal of preliminary preparatory work, study, and adjustment. To make a good start in that direction, it will be useful for the "explorer" to learn about problems and potentialities by reading such treatises as "Tropical Africa," by George H. T. Kimble; "The Emerging States of French Equatorial Africa," by Virginia Thompson and Richard Adloff; "Cultures and Societies of Africa," by Simon and Phoebe Ottenberg.

Washington Talks It Over

Chemical People Must Start Reckoning With A New Organization—the OECD—for It Will Have Much To Do With Trends in the Vital International Trade Programs.

By Ralph L. Cherry
Washington Editor

Organization for Economic Cooperation Development (OECD) is a name that the chemical industry will be hearing more and more in developments coming out of Washington. For it is a name that affects trends of US participation in international trade programs so vital to the chemical industry.

It will be well, therefore, for chemical people to become acquainted with the organization for it soon may have to take a stand on the question of whether the United States should become a participant. President Kennedy has given this aim high priority in his economic program.

At first glance, the tendency is to liken OECD to the two ill-fated prior organizations in which the Truman and Eisenhower Administrations sought US participation—the Organization for Trade Cooperation (OTC) and the International Trade Organization (ITO). There is, however, a substantial difference, though opponents say that ultimately it could amount to the same thing.

OECD actually is a replacement for the Organization for European Economic Cooperation (OEEC) with broader objectives. Its prime purpose is to provide a forum for continuing consultation aimed at achieving high employment, raising living standards and maintaining financial stability of its members; aiding less developed countries—both members and non-members, and contributing to expansion of non-discriminatory world trade.

These broad objectives, of course, envision a wealth of detailed moves wherein individual industries—such as the chemical industry—in this country will have a vital concern, just as was the case with OTC and ITO. OECD differs from these two organizations, however, in two very important respects—no decision by the ministerial governing committee will be binding on a nation that abstained in the balloting. Moreover, no decision is binding on a voting member until it has complied with its own constitutional procedures.

At the present time, the convention for establishing OECD carries the signatures of twenty nations, including the US and Canada. All of the big chemical producing countries have signed up, except Japan.

The next move is ratification by the senate. President Eisenhower submitted the convention in the closing days of his term. Mr. Kennedy has asked the senate to give it early favorable consideration so that it can come into force by September 30.

OPD'S BOOKSHELF

Buyers Guide

The third edition of BUYERS GUIDE TO IMPORTED GERMAN PRODUCTS,* revising and updating the 1958-59 edition, contains a directory of 2,500 German export manufacturers, their 1,500 US importers or agents and a classified index of over 2,000 German products sold in the US.

With over 50 percent of its contents changed, the third edition reflects the continued growth of a German-American trade volume now running at $2 billion annually. The section "Facts on Germany" has been revised to provide American business with the latest information on Germany as a market as well as a supplier. Included are facts and figures on German business, taxation, government regulations, market research, together with conversion tables and statistics.

* 1960-1961 BUYERS GUIDE TO IMPORTED GERMAN PRODUCTS. Published for the German American Chamber of Commerce. 436 pages. Nordeman Publishing Company, New York. $6.75.

CHEMICALS AND RELATED MATERIALS

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Current MARKET Quotations

Unless otherwise indicated, listings are first-hand quotations prevailing, according to information and belief, February 10 on large lots, f.o.b. New York, with the lowest in the left-hand column and the highest in the right-hand column. The listings do not represent bid and asked prices nor a range over the week. Differences between high and low may be accounted for by differences in quantity, quality, locality, or individual suppliers' views. An index to the weekly market reports is to be found on page 4.

A

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dms., l.c.l., frt. alld ..... lb. .13½- —
tanks, frt. alld ..... lb. .10 - —
Acetaldehyde prices 1c. higher in West.
Acetaldol (see Aldol)
Acetanilide, tech. flaked, bbls., bgs., c.l., frt alld lb. .32½- —
bbls. bgs. ton lots, frt alld. lb. .33½- —
bbls. bgs. smaller lots, frt. alld lb. .36½- —
USP bbls. 225-lb dms. any quantity lb. .90 - —
100-lb. dms., any quantity lb. .92 - —
Acetic acid, comi. or redist., 28%, bbls 100 lbs 4.80 - —
56%, bbls. ..... 100 lbs 8.25 - —
70%, bbls. ..... 100 lbs 9.95 - —
80%, bbls. ..... 100 lbs.10.45 - —
Acetic acid, glacial, syn., CP, dms., c.l., dlvd. E 100 lbs. 18.75 - —
tech., dms., c.l., dlvd. E. 100 lbs. 13.75 - —
dms., l.c.l., dlvd. E ...100 lbs. 15.25 - —
tanks, dlvd. E ...100 lbs. 10.00 - —
USP, tanks, dlvd. E ...100 lbs. 13.00 - —
Acetic anhydride, aluminum ret. dms., c.l., dlvd. E lb. .16½- —
aluminum ret. dms., l.c.l., dlvd E. lb. .18 — —
tanks, dlvd. E lb. .14 — —
Acetic anhydride prices 1c. higher in West.
Acetoacetanilide, fib. dms., c.l., dlvd lb. .80 - —
fib dms., l.c.l., dlvd lb. .81 - —
Acetoacet-o-chloroanilide, fib. dms., c.l., dlvd lb. 1.35 - —
fib dms., l.c.l., dlvd lb. 1.36 - —
Acetoacet-o-toluidide, fib. dms., c.l., dlvd lb. .82 - —
fib dms., l.c.l, dlvd lb. .83 - —
Acetone, CP, dms., c.l., dlvd lb. .10½- —
dms., l.c.l., dlvd ..... lb .12 - —
tanks, dlvd. ..... lb. .08 - —
Acetonitrile, dms., c.l., frt. alld lb. .34½- —
dms., l.c.l., frt. alld ..... lb. .36 - —
tanks, frt. alld ..... lb. .32 - —
Acetophenetidin, USP, 200-lb. dms., 1,000 lbs., frt. alld lb. 1.20 - —
100-lb dms. 1,000 lbs., frt. alld. lb. 1.22 - —
Acetophenone, cns., dms ..... lb .42 1.30
Tech., dms., c.l., works ..... lb. .47 - —
dms., l.c.l., works ..... lb. .47¾- —
tanks, works ..... lb. .45 - —
N-Acetyl-p-aminophenol, dms., t.l. (min. 23,000 lbs.), frt. adjusted lb. 1.30 - —
dms., 1,000-lb. lots, same basis lb. 1.40 - 1.45
dms., 100-lb. lots, same basis ... lb. 1.54 - 1.57
Acetylene black, imp., bgs., c.l., duty and freight extra lb. .20 — —
cs., l.c.l., ex whse ..... lb. .25½- .31
Acetylene tetrabromide, 16-dm. lots or more, f.o.b. works lb. .53 - —
Acetylsalicylic acid, USP, cryst. (20, 40 mesh), powd. (80 mesh), 250-lb. dms., c.l., pt. of shipt lb. .56¼- —
USP 10% starch granulation, 12-50 mesh, white, 250-lb. dms., c.l., same basis lb. .56¼ — —
(Pink and green granulations 5c. per lb. higher.)
Freight equald. shipt. identical quantity over standard routes, from N.Y., Phila., Midland, Mich., Chicago and St. Louis.
Acetyltributyl citrate, tech., non-ret. dms., c.l., frt. alld. E. of Denver lb. .35½- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .36½- —
tanks, frt. alld. E. of Denver. lb. .33 - —
Acetyltriethyl citrate, tech., non-ret. dms., c.l., frt. alld. E. of Denver lb. .39½- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .40½- —
tanks, frt. alld. E. of Denver lb. .37 - —

ACIDS

Acid quotations are listed individually. For example, prices on Acid, cresylic, may be found in the C's under Cresylic acid.

Aconite root, bls. ..... lb. .50 .55
Acrolein, tech., dms., c.l., works lb. .36 - —
dms., l.c.l., works ..... lb. .36¾ - —
tanks, works ..... lb. .31 - —
Acrylamide, dms., t.l., f.o.b. works. lb. .58 - —
dms., t.t.l., same basis ..... lb. .60 - —
Acrylic acid, glacial, dms., c.l., t.l., dlvd lb. .42½- —
dms., l.c.l., t.t.l., dlvd ..... lb. .43½- —
tanks, dlvd. ..... lb. .40 — —
tech., esterification, tanks, frt. alld. lb. .38 - —
tech., polymerization, tanks, same basis lb. .38 - —
Acrylonitrile, dms., c.l., t.l., frt. equald lb. .28 - —
dms., l.c.l., t.t.l., frt. alld ..... lb. .27 - —
tanks, frt. equald ..... lb. .23 - —

Abies Siberica Oil—Ammonium Bicarbonate

Adeps lanae (see lanolin).
Adipic acid, bgs., c.l., dlvd. ..... lb. .32¼- —
bgs., l.c.l., dlvd. ..... lb. .35 - —
Agar, USP Kobe No. 1, strip, bls. lb. 3.00 - 3.10
powd., 30 mesh., fib., dms lb 2.40 — —
dl-Alanine, dms., 100-lbs. or more, f.o.b works lb. 5.25 - —
dms. 1-99 lbs., same basis lb.10.00 - —
Aldol, 95%, dms., l.c.l., works lb. .28 - —
Aldrin, tech., fib. dms., c.l., t.l. dlvd lb. .99 - —
fib. dms., l.c.l., dlvd. lb. 1.04 - —

ALCOHOLS

Alcohol quotations are listed individually. For example, prices on Alcohol, furfuryl, may be found in the F's under Furfuryl alcohol.

Aletris root, bgs ..... lb. 1.50 1.75
Algin (see Sodium alginate)
Alizarin (see 1,2-Dihydroxy anthraquinone).
Alkali blue dry, 250-lb. bbls., dlvd. E. of Rockies lb. 2.45 - —
Alkali blue prices 1c. higher W of Rockies
Allethrin, 90%, dms., frt. alld lb.28.80 -28.90
Soln., 20%, dms., 200-2,000 lb. lots, frt. alld lb. 6.50 - 6.55
2½% dms. frt alld. ..... lb. .95 - 1.10
Allspice oil (see Pimento oil).
Allyl alcohol, dms., c.l. dlvd. ..... lb. .32½- —
dms., t.c.l., dlvd. ..... lb. .34 - —
tanks, dlvd. ..... lb. .30 - —
Allyl bromide 55-lb cbys 5,005 lbs. or more, works lb. 1.50 - —
55-lb. cbys., 1,045 to 4,950 lbs. works lb. 1.55 - —
55-lb. cbys., 55 to 990 lbs works. lb. 1.60 - —
Allyl chloride, dms., c.l., dlvd. ..... lb. .17½- —
dms., t.c.l., dlvd. ..... lb. .19 - —
tanks, dlvd ..... lb. .15 - —
Allyl isothiocyanate (see Mustard Oil, syn.).
Almond oil, artif., bitter (see Benzaldehyde)
Almond oil, nat., bitter, f.p.a., bots. lb. 2.75 3.45
NF, bots. ..... lb. 3.00 3.30
sweet, USP, cns., dms. ..... lb. .60 - .70
Aloe, Cape, cs. ..... lb. 35 - .40
powd. cs ..... lb 60 - .65
Curacao, kgs. ..... lb. .75 - —
powd., kgs. ..... lb. .85 - —

Abbreviations

Used in OPD Market Quotations

alld.	allowed	distr.	distributor	No.	number
amorph.	amorphous	djns.	demijohns	nom.	nominal
AMP	American melting point	dlvd.	delivered	o-	ortho
anhyd.	anhydrous	dms.	drums	ord.	ordinary
AOAC	Association of Official Agricultural Chemists	dom.	domestic	oz.	ounce
		E.	east	p-	para
		e.p.	end point	Pac.	Pacific
a.p.a.	available phosphoric acid	equald.	equalized	pf.	proof
		exp.	expressed	phos.	phosphate
approx.	approximately	Ext.	external	photo.	photographic
artif.	artificial	F.	fahrenheit	pkgs.	packages
ASTM	American Society for Testing Materials	ferment.	fermentation	powd.	powdered
		f.f.a.	free fatty acid	precip.	precipitated
		f.f.c.	free from chlorine	prod.	producer
Atl.	Atlantic	fib.	fiber	pt.	point
Be.	Baume	f.o.b.	free on board	pulv.	pulverized
bbls.	barrels	f.p.a.	free of prussic acid	purif.	purified
bgs.	bags	frt.	freight	redist.	redistilled
bls.	bales	gal.	gallon	refd.	refined
bots.	bottles	gran.	granular	refy.	refinery
b.p.	boiling point	grd.	ground	reg.	regular.
b.p.l.	bone phosphate of lime	i.&a.	iron and aluminum	resub.	resublimed
				ret.	returnable
b.r.	boiling range	i.b.p.	initial boiling point	SD	specially denatured
bxs.	boxes	imp.	imported	s.d.	single distilled
C.	centigrade	incl.	included	S E.	southeast
cbys.	carboys	indust.	industrial	sec.	secondary
CD	completely denatured	kgs.	kegs	secs	seconds
		l-	laevo	s.g.	specific gravity
c.i.f.	cost, insurance, freight	lacq.	lacquer	shipt.	shipment
		lb.	pound	soln.	solution
cks.	casks	l.c.l.	less carlots	s.u.	standard unit
c.l.	carlots	l.t.l.	less truckload	syn.	synthetic
cns.	cans	liq.	liquid	tanks.	railroad tankcars
coml.	commercial	mfrs.	manufacturers	tech.	technical
conc.	concentrated	m-	meta	tert-	tertiary
CP	chemically pure	m.a.p.	mixed aniline point	t.l.	truckloads
cps.	centipoises			t.w.	tankwagons
cryst.	crystalline	min.	minimum	USP	U. S. Pharmacopoeia
cs	cases	m.p.	melting point		
ctns.	cartons	N-	nitrogen	vis.	viscosity
cyls.	cylinders	n-	normal	VM&P	varnish makers & painters
d-	dextro	nat.	natural		
dbl.	double	neut	neutral	W.	west
denat.	denatured	NF	National Formulary	whse.	warehouse
dest-dist.	destructively—distilled	NNR	New and Nonofficial Remedies	w.w.	water-white
dl-	dextro-laevo				
dist.	distilled				

A unit-ton is 2,000 pounds of 1 percent of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the price figure shown gives the price of 2,000 pounds of the material.

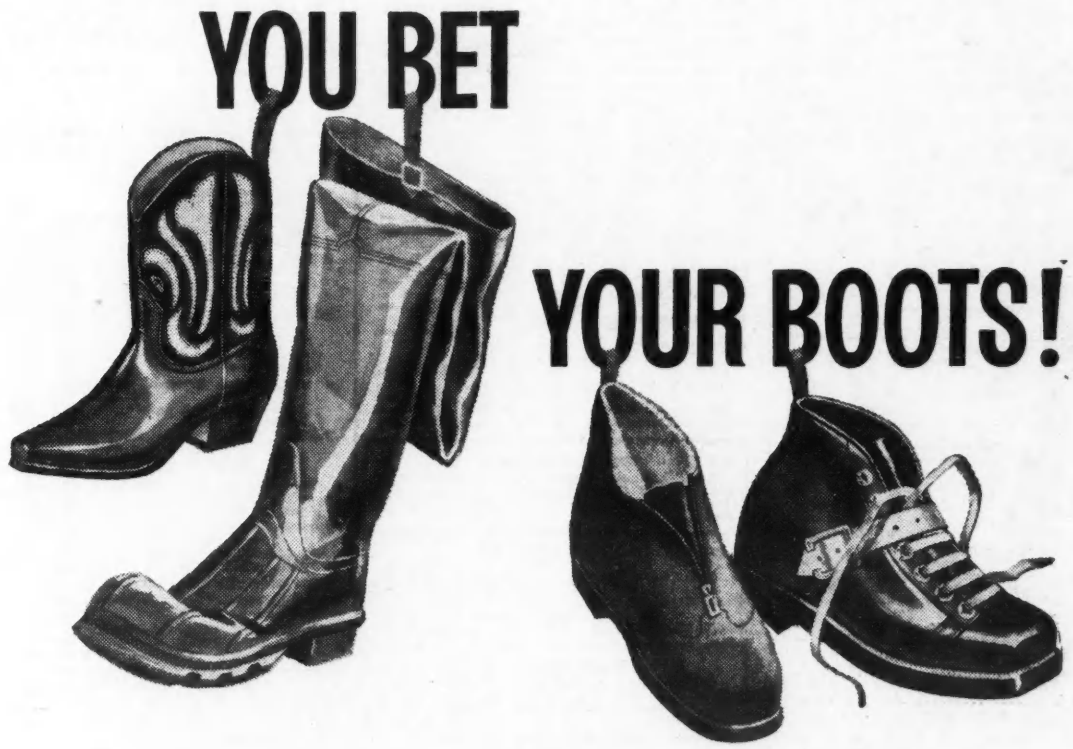
Aloin, USP, bbls., dms., kgs... lb. 1.55 1.75
Alphanaphthol (see a-Naphthol).
Alphanaphthylamine (see a-Naphthylamine).
Alphanitronaphthalene (see a-Nitronaphthalene).
Alphapicoline (see a-Picoline).
Alphaterpinol (see a-Terpinol).
Alphatocopherol (see a-Tocopherol).
Alum ammonium, gran., bgs., works 100 lbs 4.30 - —
Lump, dms., works ..... 100 lbs 5.05 - —
Powd., dms., works ..... 100 lbs 5.20 - —
USP, burnt., dms ..... lb. .20 - .21
hydrous, dms. ..... lb. .07¾- .08
Alum potassium, gran., bgs., works. 100 lbs 4.55 - —
Lump, dms., works ..... 100 lbs 5.30 - —
Powd., dms., works ..... 100 lbs 5.45 - —
USP, burnt., dms ..... lb. .20 .21
USP hydrous, dms ..... lb. .07¾- .08
Alum, potash-chrome, dms ..... lb. .17 — —
Alumina, calcined, bgs., c.l., works lb. .0535- —
bgs., l.c.l., works ..... lb. .056 .0635
Aluminum acetate, basic soln., 24%, bbls. l.c.l. works lb. .14 — —
Aluminum chloride coml., anhyd., dms., c.l., works, frt. equald lb. .16 — —
dms. l.c.l. works lb 16½- — —
cryst. dms. c.l. works 100 lbs 21.00 — —
dms., l.c.l. works 100 lbs.21.50 — —
Soln., 32° cbys., c.l., works lb 0495- — —
cbys., l.c.l., works lb 0570- .1095
tanks, works 100 lbs. 3.95 — —
NF, gran., dms. works lb. .31 .32
Aluminum fluoride tech., anhyd., bgs., c.l. works lb. .16¼ — —
bgs., l.c.l. works lb. .17¼- .19¼
bulk, c.l. basis 80% lb. .14½- — —
Aluminum fluoride in fib. dms. 0.35c per lb higher
Aluminum formate, basic soln., containers extra, c.l., works. 100 lbs.11.00 - —
containers extra, l.c.l. works. 100 lbs.11.50 — —
Aluminum hydrate, heavy, bgs. c.l. frt. equald lb. .0370- — —
bgs. 20,000-40,000 lb to a same basis lb. .0395- — —
bgs. 2,000-20,000 lb to a same basis lb. .0495- — —
bulk, c.l., same basis ..... lb. .0330- — —
Aluminum hydroxide, dried, USP XV fib dms., works lb. .82½- — —
fib dms., contract, works lb. 79½- — —
Aluminum hydroxide, gel, pharmaceutical, 14-15% Al_2O_3, fib dms., works lb. .22 - — —
9-9½% Al_2O_3, fib dms. works. lb. .19 - — —
fib. dms. contract, works lb. .18 - — —
Aluminum hydroxide, tech., powd., (see Aluminum hydrate).
Aluminum metal, 99½% + 30-lb ingots, 10,000-lb lots, frt. alld lb. .2810- — —
50-lb. pigs, 10,000-lb lots, frt alld. lb. .26 - — —
Aluminum oxide, amorphous (see Alumina, calcined).
Aluminum paste lining, extra-fine, dms lb. 71 - — —
Standard grade, dms ..... lb. 48½- — —
Aluminum powder, lining, extra-fine, dms lb. 1.13 — —
Standard grade, dms ..... lb. .83 — —
Aluminum paste and powder prices are f.o.b. shipping point. Add 1c per lb. for 100-lb. dm., 1½c per lb. for 50-lb dm., 3c. per lb. for 10 lb. can and 5c. to 12c. per lb. for smaller containers. Deduct 1c per lb. for single shipment of 400 to 1,499 lbs. 2c for 1,500 to 4,999 lbs., 3c. for 5,000 to 29,999 lbs. and 4c. for 30,000 lbs. or more. Where destination is within the continental U. S., a deduction equivalent to the lowest available common carrier transportation rate will be made from seller's invoice on orders of 200 lbs. or more
Aluminum resinate, precip., 2.1% Al, dms lb. .45 - — —
Aluminum stearate, dibasic, ctns., c.l lb. .39 - — —
ctns., l.c.l. ..... lb. .40 - .44
Monobasic, ctns., c.l. ..... lb. .39 - — —
ctns., l.c.l. ..... lb. .40 - .44
Tribasic, ctns., c.l. ..... lb. .39 - — —
ctns., l.c.l. ..... lb. .40 - .44
Aluminum sulfate, coml., grd., bgs. c.l., works, frt. equald ton.41.00 - — —
bulk, c.l., same basis ton.40.00 - — —
lump, bgs., c.l., same basis ton.44.00 - — —
iron-free, bgs., c.l., works, frt. equald 100 lbs. 3.80 - — —
bgs., l.c.l., works, frt. equald. 100 lbs. 4.30 - 8.30
USP, gran., 400-lb. dm., works. lb. .30 - — —
USP, powd., dms., works ..... lb. .27 - — —
Aluminum sulfate prices $1 per ton higher in the South.
Aluminum trihydrate, heavy (see Aluminum hydrate, heavy).
Ambergris, gray, bots ..... oz. 6.50 -10.00
p-Aminoacetanilide, tech., paste, dms., frt. alld lb. 1.57 — —
Aminoacetic acid, NF, bbls., frt. adjusted lb. 1.35 - 1.60
Aminoazotoluene base, bbls., 100% basis lb. 1.15 - 1.18
p-Aminobenzoic acid, tech., dry, dms., works lb. 1.72 — —
2-Amino-4-chlorophenol, tech., solid, dms., frt. alld lb. 2.15 - 3.85
p-Aminodiphenylamine, tech., solid, dms., frt. alld lb. 3.00 - — —
Aminoethyl ethanolamine, dms., c.l., dlvd lb. .475 - — —
dms., l.c.l., dlvd. ..... lb. .49 - — —
tanks, dlvd. ..... lb. .45 - — —
2-Amino-2-methyl-1-propanol, dms., c.l., frt. alld lb. .44 - — —
dms., l.c.l., frt. alld. ..... lb. .45 - — —
tanks, frt. alld. ..... lb. .42 - — —
m-Aminophenol, dist., dms., ton lots. lb. 2.05 - — —
dms., smaller lots. ..... lbs. 2.50 - — —
p-Aminophenol, dms., frt. alld. lb. 1.15 - — —
Aminophylline, USP, 100-lb. dm., frt. alld lb. 3.25 - — —
p-Aminosalicylic acid, dms., 100 lbs. or more, frt. adjusted lb. 3.40 - — —
Ammonia, anhyd., fertilizer, tanks, works, frt. equald. E. of Rockies ton.92.00 - — —
refrigeration, tanks, works, frt. equald. E. of Rockies ton.94.50 - — —
Aqueous, 29.4%, tanks, works, anhyd. basis, E. of Rockies. ton.95.00 - — —
Ammoniacal liquor (see Ammonia, aqueous).
Ammoniac, sal., gray, bgs., c.l. works, frt. equald 100 lbs. 8.25 — —
bgs. l.c.l., same basis 100 lbs. 8.65 -12.65
Ammoniac, sal., white (see Ammonium chloride, tech.)
Ammonium acetate, purif., dms lb. .40 - — —
Ammonium benzoate, USP, 100-lb. dms., 1,000-lb. lots, works. lb. 1.90 - — —
Ammonium biborate, gran., dms., cl., works ton.325 - — —
dms., ton lots, ex whse. 100 lbs.22.86 - — —
dms., smaller lots, ex whse. 100 lbs.24.11 - — —
Ammonium bicarbonate, dom., dms., c.l., works 100 lbs. 7.00 - — —
dms., l.c.l., works ..... 100 lbs. 9.00 - — —

Ammonium bichromate, dms., works lb. .49 - .53
Ammonium bifluoride, dms., dlvd lb. .3145- .3245
Ammonium bromide, NF, gran., dms., c.l., t.l., frt. equald lb. .44 - —
dms., l.c.l., same basis lb. .46 - —
Ammonium carbonate, USP, lump, dms., c.l. lb. .15½- —
Ammonium chloride, white, tech., fine gran., bgs., c.l., works. 100 lbs 6.00 - —
bgs., l.c.l., works 100 lbs. 8.00 8.45
USP, gran., 250-lb dm. lb. .17¼- —
Ammonium citrate, dibasic, 250-lb. dm. f.o.b. works lb. .77 - —
Ammonium dichromate (see Ammonium bichromate)
Ammonium fluoride (see Ammonium bifluoride)
Ammonium gluconate, tech., 200-lb. dm., f.o.b. works E lb. .45 - —
Ammonium hydroxide (see Ammonia aqeous).
Ammonium iodide, NF, 25-lb. jar, f.o.b works lb. 4.26 - —
Ammonium lauryl sulfate, dms., c.l., frt. alld lb. .20½- —
dms., t.t.l., frt. alld lb. .21½- —
tanks, frt. alld lb. .19½- —
Ammonium lignin sulfonate, bgs., c.l., works 100 lbs. 3.25 - —
bgs., t.c.l., works 100 lbs. 3.40 - 3.65
Ammonium linoleate, 80%, dms., works lb. .50 - .55
Ammonium molybdate, CP cryst., 400 lb dms. 15,000-lbs works, lb. 1.22 - —
400-lb dms. 2,000-lb contracts, works lb. 1.23 - —
400-lb. dms. works lb. 1.24 - —
Ammonium nitrate, dom., fertilizer grade, 33.5% N, bgs. f.o.b works ton.67.00 - —
Ammonium nitrate, dom., with dolomite, 20.5% N, bgs., c.l., Hopewell, Va ton.48.00 - —
Imp., Canadian, 33.5% N, eastern, bgs., c.l., ship't point, frt. equald to $3 ton base price, ton.70.00 - —
Ammonium oxalate, tech., fine gran., 250-lb dm., f.o.b works E lb. .28½- —
Tech., powd. 200-lb. dm., same basis lb. .28½- —
Ammonium pentaborate, gran., bgs., c.l., works ton.193.00 - —
bgs., ton lots, ex whse. 100 lbs.15.27 - —
bgs., smaller lots, ex whse 100 lbs.16.52 -18.52
Ammonium pentaborate powder $10 per ton higher in bags.
Ammonium persulfate, tech., dms., 10-ton lots or more, works lb. .18 - —
dms., smaller lots, works lb. .20 - .23
Ammonium phosphate, comi., bgs., c.l., works, frt. equald lb. .09¼- —
bgs., l.c.l., same basis lb. .10 - —
Dibasic, NF, V, bbls., dms lb. .46 - —
Dibasic, tech., bgs., c.l., works, frt. alld lb. .09¼- —
Ammonium silicofluoride, dms., works lb. .12¼- .13¾
Ammonium sulfamate, bgs. c.l., t.l., works lb. .19 —
bgs. l.c.l. works lb. .20½- .27
Ammonium sulfate standard granular, bulk f.o.b works, base price ton.32.00 - —
Ammonium sulfate, standard, gran., purif., c.l., 100-lb bgs., f.o.b works lb. .08½- —
Large granular, bulk, c.l. works ton.35.00 - —
bgs., c.l., works ton.40.00 - —
Tech., bulk, c.l., t.l., works ton.52.00 - —
bgs., c.l., t.l., works ton.56.00 - —
bgs. l.c.l. t.l. works 100 lbs 3.20 - 5.20
Ammonium sulfide, liq., 40-44%, tanks, frt equald, 100% basis, ton.160.00 - —
Ammonium sulfocyanide, tech. (see Ammonium thiocyanate)
Ammonium thiocyanate tech. cryst., dms. c.l., works lb. .20 - —
dms. l.c.l. works lb. .22 .26
Tech., soln., 50%, tanks, frt. equald., basis ammonium thiocyanate content lb. .17¼- —
Ammonium thioglycolate, comi., 55-gal. dms., ton lots, 100% basis lb 1.15 - —
d-Amphetamine hydrochloride, monobasic, dms lb.17.50 -23.50
dl-Amphetamine hydrochloride, dibasic dms lb 4.50 - 6.00
d-Amphetamine phosphate, fib dms., 100-lb. lots lb.15.00 —
dl-Amphetamine phosphate, dms.lb 4.20 - 5.60
d-Amphetamine sulfate, fib. dms. lb.15.00 -17.00
dl-Amphetamine sulfate, fib. dms., lb. 4.20 5.60
Amyl acetate, ex fusel oil, tech., dist., from 125° to 150°C., dms., c.l., frt alld E of Rockies lb. .18½- .19
dms., l.c.l., same basis lb. .20 - .20½
tanks, same basis lb. .16 - .16½
Amyl acetate ex pentane, reg., dms., c.l., dlvd lb. .19 - —
dms., t.c.l., dlvd. lb. .21½- —
tanks, dlvd. lb. .16½- —
tech., dms., c.l. dlvd. lb. .17 —
dms. l.c.l., dlvd. lb. .18½- —
tanks, dlvd lb. .14½- —
Amyl acetate syn., oxo process, dms., c.l., dlvd lb. .19 —
dms., c.l. dlvd. lb. .20½- —
tanks, dlvd lb. .16½ —
Amyl alcohol ex fusel oil (see Fusel oil refd).
Amyl alcohol, ferment, refd., 128°-132°C., dms., l.c.l., dlvd lb. .43½- —
refd., ACS grade, dms., l.c.l., dlvd lb. .45½- —
ex pentane, mixed amyls, dms., c.l., frt. alld lb. .19 - —
dms., t.c.l., frt. alld lb. .20½- —
tanks, frt. alld lb. .16½- —
Amyl alcohol, primary, dms., c.l., frt. alld lb. .20¼- —
dms., t.c.l., frt. alld lb. .21¾- —
tanks, frt. alld lb. .17¾- —
Sec-synthetic, dms., c.l., works, frt. alld lb. .19 —
dms., t.c.l., same basis lb. .20½- —
tanks, same basis lb. .17 —
Tert-synthetic, dms., c.l., frt. alld, E lb. .17 - —
dms., t.c.l., frt. alld, E. lb. .18½- —
tanks, frt. alld E lb. .14½- —
Amyl alcohol, 1-pentanol (syn. normal), dms., c.l., works lb. .41½- —
dms., l.c.l., works lb. .43 - —
tanks, works lb. .39½- —
2-pentanol, dms., c.l., works lb. .65 - —
dms., l.c.l., works lb. .70 - —
tanks, works lb. .60 - —
Amyl n-butyrate, dms. lb. 1.00 1.25
Amyl cinnamic aldehyde, dms lb 1.70 2.20
Para-tert Amyl phenol, dms. c.l., works, lb. .28 - —
dms., l.c.l., works, lb. .29 - —
Amyl salicylate, cns., dms. lb. .71 - —
Amyris oil, dms lb. 1.50 - —
Anethol, tech., dms. lb. .80 - .92
USP, cns., dms. lb. 1.05 - —
Angelica root, bls. lb. .0 - 1.00
Angelica root oil, bots lb 120.00 -140.00
Angelica seed oil, bots lb 120.00 -130.00
Aniline, dms., c.l., frt alld lb .20 —
dms., l.c.l., frt. alld lb .21 - —
tanks, frt alld lb .18 - —
Aniline oil (see Aniline).

Aniline salt, dms., c.l., t.l., 20,000 lbs. min., frt. alld lb. .32 - —
dms., l.c.l., same basis lb. .35 - —
Anise oil, USP, dms lb. 1.90 - 2.00
Anise seed, Turkish, bgs. lb. .24 - —
Spanish, bgs. lb. .28 - —
Anisic aldehyde, dms lb. 1.50 - 2.20
o-Anisidine, dms., c.l., frt. alld lb. .80 - —
dms., l.c.l., same basis lb. .82 - —
tanks, same basis lb. .78 - —
p-Anisidine, dms., works lb. .97 - —
Anthracene, 90-95%, dms., c.l., t.l. f.o.b., works lb. .42½- —
dms., l.c.l., minimum shipment 1,000 lbs., same basis lb. .45 - —
Anthranilic acid, 99% 150-lb. dms., dlvd lb. 1.15 - —
Anthraquinone, 99.5% bgs., c.l., frt. alld lb. .70 - —
bbls., l.c.l., same basis lb. .73 - —
Electrical grade, bgs. l.c.l., same basis lb 1.10 —
Antimony butter (see Antimony trichloride).
Antimony metal, bulk, c.l., mines, lb. .29 - —
cs., c.l., mines lb. .29½- —
Antimony oxide, bgs., c.l., frt. alld. lb. .26½- —
bgs., l.c.l., frt. alld. lb. .28 - —
Prices of antimony oxide are 2% higher west of the Rockies.
Antimony sulfide, approx. 65%, bgs., 10,000-lb. lots, dlvd lb. .23 - —
bgs., smaller lots, dlvd lb. .24 - .26
Antimony trichloride, anhyd., solid, pails, c.l., works lb. .41 - —
pails, t.c.l., works lb. .43 - —
Antimony-potassium tartrate, tech., powd., 250-lb., dm., f.o.b. works, E lb. .69½- —
USP, powd., 250-lb. dm., same basis lb. .74½- —

Apomorphine hydrochloride, USP, bots., 25-gr. lots oz.33.60 - —
Apricot kernel oil, USP, dms. lb. .55 - .70
Arabic gum, amber sorts, 10 bgs. lb. .21 - .23
USP, powd., bbls. lb. .27 - .30
Areca nuts, powd., bbls. lb. .13 - —
Arecoline hydrobromide, NF, bots., tins, 100 oz. or more oz. 4.00 - —
l-Arginine, free base, dms., 10-kilo lots or more kilo.90.00 - —
l-Arginine glutamate, dms., 10-kilo lots or more kilo.64.80 - —
l-Arginine monohydrochloride, dms., 10-kilo lots or more kilo.60.00 - —
Arnica flowers (true Montana), bls. lb. .75 - —
Aromatic petroleum solvents (see Solvent Naphtha, petroleum, aromatic).
Arsenic, crude (95%), bulk, c.l., works lb. .016 - —
bbls., c.l., works lb. .0.31 - —
Arsenic trioxide, NF, powd., dms., 300-lbs., f.o.b. works lb. .48 - —
Arsenic, white, powd., bbls., c.l., works lb. .04½- —
bbls., t.c.l., works lb. .06½- .07¼
Arsenous acid, tech. (see Arsenic, white).
Arsenous acid, USP (see Arsenic trioxide).
Arylid maroons, deep shades, bbls. lb. 3.70 - —
Light shades, bbls. lb. 2.85 - —
Asafetida gum, cns lb. .36 - .40
Powd., bbls., dms lb. .75 - .80

Asbestine (see Talc, fibrous, New York).
Asbestos, Canadian crude
6D, c.l (30 tons) mines ton.86.00 —
7D, c.l (30 tons) mines ton 75.00 —
7F, c.l (30 tons), mines ton 71.00 —
7H, c.l (30 tons) mines ton.61.00 —
7K, c.l (30 tons) mines ton.50.00 —
7M, c.l (30 tons) mines ton 44.00 —
7R, c.l, (30 tons) mines ton 43.00 —
7RF c.l (30 tons) mines ton.44.00 —
7T, c.l. (30 tons), mines ton 41.00 —
7TF c.l (30 tons) mines ton 44.00 —
Asbestos prices are in Canadian funds; l.c.l lots $4 per ton higher
Ascorbic acid USP dms. 100-kilos kilo. 6.80 - —
dms., less than 100-kilos kilo 7.05 - —
Ash, black (see Barium sulfide)
Asphalt, gilsonite, black jet, bgs., c.l., mines ton.43.00 - —
ex-whse. 5 tons or more, N. Y., N. J ton.89.50 - —
select, brilliant black, 340°-360°F. fusing pt., bgs., c.l., mines, ton.46.00 - —
270°-295°F fusing pt., bgs., c.l., mines ton.43.00 —
Asphalt, petroleum, cut-back, tanks, tankwagon, refy gal. .09½- —
emulsion, tanks, tankwagon refy gal. .09½ —
steam-refd., 50-80 penetration, tanks, tankwagon, refy ton.21.00 —
85-300 penetration, tanks, tankwagon, refy ton.20.00 —
Aspirin (see Acetylsalicylic Acid).



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Atropine, NF, tins ..... oz. 6.50 - 7.50
Atropine sulfate USP, bots .... oz 5.25 5.75
Azelaic acid, bgs., c.l., dlvd. ... lb. .40 —
bgs. ton lots, same basis ..... lb .41 - —

B

Bacitracin, bulk, 1,000,000,000 or more units 50,000 units. .65 - —
less than 1,000,000,000 units, 50,000 units .70 —
Balm of Gilead buds, dried, bgs lb 1.25 1.35
Barberry root bark, bgs lb 1.00 1.10
Barbital, NF 100-lb dms., f.o.b. works lb 4.50 - —
Barbital sodium, NF, 100-lb dms. lb. 4.75 - —
Barium carbonate, precip., bgs., c.l., works ton.111.50 - —
bgs. smaller lots, works ton.126.50 - —
Barium chlorate, dms., works lb 32 .41
Barium chloride anhyd., bgs., c.l., works ton.176.00 - —
bgs., t.c.l., works ton.196.00 - —
NF, cryst., dms., 400-lbs., works.lb .23 - —
Tech., cryst., bgs. c.l., works. 100 lbs. 7.00 - —
bgs., t.c.l. works 100 lbs 8.00 - —
Barium chromate, bgs., frt. equald. lb. .38 - —
Barium dioxide (see Barium peroxide)
Barium hydrate, cryst., bgs., c.l., t.l., frt. equald ton.208.00 - —
bgs., t.c.l., t.l., frt equald ton.218.00 - —
Barium monohydrate, 99%, bgs., c.l., frt equald 100 lbs.11.25 - —
bgs. t.c.l., frt. equald 100 lbs.11.75 - —
Barium monoxide (see Barium oxide).
Barium nitrate, bbls., c.l., t.l., dlvd lb 16 - —
bbls., t.c.l., t.l.c., dlvd. lb 17 - —
Barium oxide, grd. dms., c.l., t.l., frt equald ton275.00 - —
dms. t.c.l., t.l.c., frt equald ton 285.00 - —
Barium peroxide, dms. frt equald. lb 20 —
Barium stearate, ctns. c.l., frt alld. lb .41 - —
ctns. t.c.l. same basis ..... lb. .42 .46
Barium sulfate, tech. (see Barytes and blanc fixe).
Barium sulfate, X-ray, 100-lb dm. lb. .19 - —
Barium sulfide, dms., c.l. works ton.100.00 —
dms., t.c.l., works ton.110.00 —
Barytes, southern, off-color, bgs. mines ton 30.00 - —
95-75% bgs., mines ton 30.00 —
white, water-grd, paper bgs., c.l. St. Louis ton.60.00 -60.25
paper bgs., ex whse New York ton 84.85 —
Battery acid, cbys., c.l., works lb. 100 lbs 2.35 —
cbys, t.c.l., works, E. 100 lbs 2.65 -10.95
Bauxite, bulk, mines ton 7.00 -10.00
Bay oil, NF, Puerto Rican, 50-55% cns lb. 3.25 - —
55-60%, cns. ..... lb. 3.60 - —
NF, West Indian, 50-55% cns. dms lb. 3.75 - —
Bayberry wax, bgs lb 65 .70
Beeswax, crude, African, bgs .. lb. .54 .55
Brazilian, bgs. ..... lb. .58 .59
Central American, bgs. ..... lb. .57 - .58
Chilean, bgs. lb .59 Nom
Refd., USP, bleached white, bricks 100-lb ctns lb. .67 .69
white, slabs, 100-lb. ctns lb. .66 - .68
ye ow, bricks 100-lb ctns lb 59 .61
yellow, slabs, 100-lb. ctns lb 58 .60
Belladonna leaf, bls. ..... lb .24 .26
Belladonna root, bls. ..... lb .28 .35
Bentonite, dom 200 mesh, bgs. c.l. mines ton.14.00 - —
Imp. Italian, white, high gel., bgs., 5-ton lots ex wase ton.95.20 - —
bgs., 1-ton lots, ex whse ton.99 00 - —
Imp. Italian, white, low gel. bgs., 5-ton lots, ex whse ton.93.40 - —
bgs., 1-ton lots ex whse ton.97 16 - —
Benzal chloride, cbys., works lb 44 —
Benzaldehyde, NF, dms. ..... Tech., dms., c.l., t.l. ..... dms., t.c.l. .....lb. .44 - —
Benzene, pure or nitration, tanks, works: Baton Rouge, La ..... gal. .34 - —
Bethlehem, Pa ..... gal. .34 - —
Birmingham district gal. .34 - —
Chicago district ... gal. .34 - —
Cleveland district ... gal. .34 - —
Geneva, Utah ..... gal .34 —
Houston, Tex. ..... gal. .34 - .40
Johnstown, Pa ..... gal. .34 - —
Benzene, pure or nitration, tanks, works: Lorain, Ohio ..... gal. .34 - —
Middletown, Ohio ... gal. .34 - —
Mennequa, Colo. ... gal. .34 - —
Philadelphia district gal. .34 - —
Pittsburgh district gal .34 —
Port Arthur, Tex. ... gal. .34 - —
Benzene, pure or nitration, tanks, works: St. Louis, Mo. District.gal. .34 - —
Sprin gs Point, Mo ... gal .34 —
Syracuse, N. Y. ..... gal. .34 - —
Terre Haute, Ind ... gal .34 - —
Youngstown, Ohio ... gal. .34 - —
Lackawanna, N. Y. gal. .34 - —
Lone Star, Tex gal. .34 - —
Benzene hexachloride 25% and 99% gamma isomer (see Lindane).
Benzene hexachloride, tech., high gamma, bgs., c.l., t.l., consignment, dlvd. gamma-unit. .0075 —
bgs., c.l., t.l., direct sale, f.o.b. works gamma-unit. .0065- —
Tech. low gamma, bgs., c.l., t.l., consignment, dlvd gamma-unit. .0075- —
bgs., c.l., t.l., direct sale, f.o.b. works gamma-unit. .0056- —
Benzidine hydrochloride, bbls., c.l., frt. alld., 100% basis lb. 1.19 - —
bbls., t.c.l., same basis lb. 1.21 - —
Benzidine sulfate, tech., bbls., frt. alld., 100% basis lb 1.21 - —
Benzidine yellow, AAA, bbls., dlvd. lb. 2.20 - —
AAOT, bbls., dlvd. ..... lb 2.55 - —
Lightfast, bbls., dlvd. ..... lb 3.40 - —
Benzocaine, dms. 100-lbs., frt alld lb 3.25 - —
Benzoic acid, tech., dms., c.l., t.l., frt. alld lb. .25 - .37
dms., t.l.l., same basis ..... lb. .29 - .41
tanks, same basis ..... lb. .21 - —
USP, bbls., dms., ton lots lb .48 - —
bbls. dms., 1,000-lb lots lb .50 —

BENZOL

Benzol quotations, both coaltar and petroleum, may be found under Benzene.

Benzoin gum, Sumatra, cs. .... lb. .32 —
Benzophenone, dms ..... lb. 1.35 - 1.40
Benzotriazole, tech. dms., 1,000-lb lots, works lb. 1.95 - —
Benzotrichloride, cbys., 1,000-lb. lots or more, frt. equald.lb. .21 - —
cbys., smaller lots, frt. equald lb. .23 - —
Benzoyl chloride, cbys. dms., c.l., works, frt. equald lb. .22 - —
cbys., t.c.l., same basis lb .23 - —
tanktrucks, dlvd Metropolitan area lb. .21 - —
Benzoyl peroxide, purit. fib. dms., 50 to 1,000-lb lots, works lb. .98 1.08
Benzyl acetate, f.f.c. cns. dms lb. .54 - —
Benzyl alcohol, NF, dms lb. .54 - —
Tech., dms., dlvd lb. .47½- .65
Benzyl benzoate, USP 40-lb dms.lb. .62 - —
Benzyl chloride, tech., dms., c.l., f.o.b. frt. equald lb. .23 - —
dms., t.c.l., same basis lb .24 - —
tanktrucks, dlvd., Metropolitan area lb. .21 - —
Benzyl cinnamate cns. lb 3.30 3.60
N-Benzyl-N,N-dimethylamine, 50 dms., frt. alld lb 1.25 - —
12-49 dms., same basis ..... lb. 1.35 - —
1-11 dms., same basis ..... lb. 1.90 - —
Benzyl formate, cns. .....lb. 1.70 - 1.85
Benzyl isoeugenol, cns ..... lb. 8.20 - 8.30
Benzyl propionate, bots ..... lb. 1.30 - 1.35
Benzyl salicylate, bots ..... lb. 1.50 - 1.85
Benzylidine acetone, bots ..... lb. 1.65 - 1.75
Benzylidine chloride (see Benzal chloride).
Berberine bisulfate cns lb 56.50 - —
Berberine hydrochloride, bots lb 56.50 - —
Bergamot oil, nat. NF Italian, cns. lb.11.00 -12.00
Betagammapicoline (see b,g-Picoline).
Betahydroxynaphthoic acid (see b-Oxynaphthoic acid)
Betamethylnaphthalene (see Methylnaphthalene)
Betanaphthol (see b-Naphthol)
Betanaphthylamine (see b-Naphtholamine).
Betaoxynaphthoic acid (see b-Oxynaphthoic acid).
Betaphenylethylamine (see b-Phenylethylamine)
BHC (see Benzene hexachloride tech.).
Biotin, cryst. bots gram 10.00 - —
Biphenyl (see Diphenyl).
Birchtar oil crude cns ..... lb 1.50 1.90
Rectified, cns ..... lb 1.75 2.00
Bismuth chloride, jars ..... lb 5.11 —
Bismuth hydroxide dms .... lb 4.60 4.65
Bismuth metal bxs. ton lots lb 2.25 —
Bismuth nitrate, cryst. 250-lb dm lb 2.25 - —
Bismuth oxychloride 25-lb dm. f.o.b. works lb 4.42 - —
Bismuth subcarbonate, USP 150-lb dm lb 3.70 - —
Bismuth subgallate NF 200-lb dm. f.o.b works lb 3.98 - —
Bismuth subiodide fib dms lb 5.37 - —
Bismuth subnitrate NF, 200-lb dm., f.o.b works lb 3.15 - —
Bismuth subsalicylate USP, 100-lb. dm, f.o.b works lb. 4.15 - —
Bismuth trioxide 100-lb dms., f.o.b works lb. 4.40 - —
Bismuth-ammonium citrate, USP, powd., jars lb 4.22 - —
Bisphenol-A, bgs. c.l. t.l. single shipt., 70,000-lbs or more, frt. ald lb. .30½- —
bgs. c.l., t.l. less than 70,000 lbs., same basis lb. .31 - —
bgs., t.c.l., same basis ..... lb. .32½- —
Blackberry root bark, bls lb 50 .55

BLACK PIGMENTS

Black pigment quotations are listed individually. For example, prices on Black, acetylene, may be found in the A's under Acetylene black.

Blanc fixe, direct process, bgs., c.l., works ton.160.00 —
bgs., t.c.l., works ton.170.00 - —
bgs., t.c.l., New York whse ton 215.00 - —
Blood, dried 16-16½% ammonia, bgs., New York unit-ton 5.50 —
Bloodroot, bls. ..... lb .85 .90

BLUE PIGMENTS

Blue pigment quotations are listed individually. For example, prices on Blue, ultramarine, may be found in the U's under Ultramarine blue.

Blue dyes (see Dyes)
Blue vitriol (see Copper sulfate)
Bois de rose oil, Brazilian, dms lb 2.05 - —
Peruvian, dms. lb 1.65 - —
BON acid maroons, pure, bbls lb 1.75 —
Resinated, bbls. lb 1.50 —
Bone black, dms., c.l., frt. alld lb .1750- .2225
t.c.l., works lb .1950- .2425
Pacific coast bone black prices 3¼c. per lb. higher
Bonemeal, steamed, works, E. ton 80.00 - —
Bone phosphate, defluorinated, at lime (see Defluorinated phosphate).
Bone phosphate, precip. (see Calcium phosphate tribasic)
Borax, tech., anhyd., 99½%, bgs., c.l., works ton 92.00 - —
bgs. ton lots, ex whse New York or Chicago 100 lbs. 7.67 - —
bgs., smaller lots, same basis 100lbs. 8.91 -10.91
bulk, c.l., works ton 83.00 —
Borax, tech., gran., decahydrate, 99½% bgs. c.l. works. ton.50.00 - —
bgs. ton lots ex whse New York or Chicago 100 lbs. 5.31 - —
bgs. smaller lots, same basis 100 lbs. 6.56 - 8.56
bulk, c.l., works ton 43.50 —
pentahydrate, 99½%, bgs., c.l., works ton.64.50 - —
bgs. ton lots ex whse, New York or Chicago 100 lbs. 6.12 - —
bgs. smaller lots same basis 100 lbs. 7.37 - 9.37
bulk, c.l., works ton.58.00 —
USP, powd., bgs. c.l. works ton.54.00 - —
bgs. ton lots ex whse New York or Chicago 100 lbs. 6.57 - —
bgs. smaller lots same basis 100 lbs. 7.82 - 9.82
Bordeaux powder, tribasic bgs., c.l., dlvd lb. .24 - —
bgs., t.c.l., same basis lb .26 - —
Boric acid, tech., anhyd 99.9% bgs., c.l. works ton.335.00 - —
bgs. ton lots ex whse, New York or Chicago 100 lbs.21.27 - —
bgs. smaller lots, same basis 100 lbs.22.52 -24.52
cryst. 99.5% bgs. c.l. works ton.163.50 —
bgs., ton lots ex whse New York or Chicago 100 lbs.11.67 - —
bgs., smaller lots, same basis 100 lbs.12.92 -14.92
Boric acid, tech., cryst., 99.9% dms., c.l., works ton.188.50 —
dms., ton lots, ex whse., New York or Chicago 100 lbs.13.17 - —
dms., smaller lots, same basis 100 lbs.14.42 - —
Boric acid, gran., 99.9%, bgs., c.l., works ton.112.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 8.78 - —
bgs., smaller lots, same basis 100 lbs.10.03 -12.03
dms., c.l., works ton.137 00 —
dms., ton lots, ex whse, New York or Chicago 100 lbs.10.29 - —
dms. smaller lots, same basis 100 lbs.11.54 - —
bulk, c.l., works ton.106.00 - —
powd., bgs., ton lots, ex whse., New York or Chicago 100 lbs. 9.20 - —
bgs., smaller lots, same basis 100 lbs.10.45 -12.45
dms., ton lots, ex whse., New York or Chicago 100 lbs.10.71 - —
dms., smaller lots, same basis, 100 lbs.11.96 - —
USP boric acid $25 per ton higher in bags.
Borneol, cns. ..... lb. 2.75 - —
Boron trichloride, CP 1,800-lb. cyls., works lb 1.25 - —
100-lb. cyls. works lb. 1.70 - —
Boron trifluoride, gas, cyls., t.l., works lb. 70 - —
cyls., t.t.l., works lb. 70 - —
Brimstone (see Sulfur).
Broenner's acid, bbls ..... lb. 1.53 - —
Bromine purif., cs. c.l., t.l., dlvd. E. of Rockies lb. .32 - —
cs., t.c.l., same basis lb. .34 - .39
ret. dms. c.l., t.l. dlvd. E. of Rockies lb. .31 —
ret. dms. t.c.l., same basis lb. .31 - .34
tanks, same basis lb. .21½- —
Bromochloromethane, dms., c.l., frt. equald lb. 48 - —
dms., t.c.l., same basis lb. .50 - —
tanks, same basis lb. 47 - —
Bromoform, pharmaceutical grade, 5-gal. cby., frt. equald lb. 1.95 - —
Bromstyrol, bots ..... lb. 5.25 5.35
Brucine, cns ..... oz Nominal.
Brucine sulfate, NF, cns..... oz. 1.45 - 1.75
Buchu leaves, bbls. ..... lb. .70 .75

BROWN PIGMENTS

Brown pigment quotations are listed individually. For example, prices on Brown, Iron oxide, may be found in the I's under Iron oxide brown.

Butadiene (std cyls. c.l., refy lb .21 —
cyls., t.c.l., refy ..... lb. .22 —
tanks, dlvd ..... lb. .12¾- —
Butene-1, tanks, works ..... lb. .0625- —
Butene-2, tanks, works ..... lb. .0570- —
n-Butyl acetate, ferment, dms., c.l., frt. alld lb. .17 —
dms., t.c.l., same basis lb. .18½- —
tanks, same basis lb. .14½- —
Syn. dms., c.l., dlvd. E lb. .17 —
dms., t.c.l., same basis lb. .18½- —
tanks, same basis lb. .14½- —
sec-Butyl acetate, syn. dms., c.l., dlvd E lb. .14¾- —
dms., t.c.l., same basis lb. .16¼- —
tanks, same basis lb. .12¼- —
n-Butyl acrylate, dms., c.l. or t.l., straight or mixed frt. alld. E lb. .37½- —
dms., t.t.l., same basis ..... lb. .38½- —
tanks, same basis ..... lb. .35 - —
n-Butyl alcohol, ferment, dms., c.l., frt. alld lb. .18 —
dms., t.c.l. frt. alld lb. .19½- —
tanks, frt. alld lb. .15½- —
n-Butyl alcohol, syn., dms., c.l., dlvd lb. .18 —
dms., t.c.l., frt. alld lb. .19½- —
tanks, dlvd lb. .15½- —
Sec-synthetic, dms., c.l., dlvd lb. .15 —
dms., t.c.l., dlvd. lb. .16½- —
tanks, dlvd lb. .12½- —
n-Butyl alcohol, tert-synthetic, dms., c.l., frt. alld., dlvd E lb. .16 —
dms., t.c.l., same basis lb. .17½- —
tanks, same basis lb. .13¼- —
Butyl aldehyde (see Butyraldehyde).
Butyl chloride, dms., c.l., works lb. .37½- —
dms., t.c.l., works lb. .38¼- —
n-Butyl ether, dms., c.l., works lb. .35¼- —
dms., t.c.l., works lb. .36 - —
tanks, works lb. .33¼- —
Butyl lactate, dms., c.l., frt. alld. E. of Rockies lb. .42½- —
dms., t.c.l., same basis lb. .43½- —
tanks, same basis lb. .40 - —
Butyl laurate, dms., works lb. .37½- —
Butyl methacrylate, dms., c.l., t.l., works lb. .55 —
dms., t.c.l., works lb. .55½- —
Butyl oleate, refd., dms., t.c.l., works lb. .32 —
Butyl phenylacetate, dms lb 4.50 4.60
Butyl phthalate (see Dibutyl phthalate)
Butyl stearate, dms. c.l. frt. alld E. of Rockies lb. .27¼- —
dms., t.c.l., same basis lb. .28¼- —
Butylamine (see Mono-, Di- and Tributylamine).
tert-Butylamine, dms., c.l., t.l., f.o.b. works lb. .47 - —
dms., t.c.l., same basis lb. .47½- —
tc., t.t., same basis ..... lb. .45 - —
Butylated hydroxyanisole, food grade dms. dlvd lb 4.75 - —
6-tert-Butyl m cresol (see Mono-tert-butyl-m cresol)
Butylated hydroxytoluene (see 2,6-Di-tert-butyl-p cresol)
1,3 Butylene glycol, dms. c.l., t.l., dlvd lb. .20½- —
dms., t.c.l., t.t.l., f.o.b. works lb. .22 - —
tanks, dlvd lb. .18 - —
p-tert-Butylphenol, bgs., c.l., dlvd., lb. .27½- —
bgs. t.c.l., works lb. .28½- —
Butyraldehyde, dms., c.l., dlvd lb. .22 —
dms., t.c.l., dlvd. ..... lb. .23½- —
tanks, dlvd lb. .19½- —
Butyric acid, 99%, dms., c.l., frt. equald lb. .34 —
dms., t.c.l., same basis lb. .34½- —
tanks, same basis lb. .32½- —
Butyric ether (see Ethyl butyrate)
Butyrolactone, dms., c.l., t.l., works. lb. .40 - —
dms. t.c.l., same basis lb 43 - —
n-Butyronitrile, dms., c.l., dlvd lb. .56½- —
dms., t.c.l., dlvd. ..... lb. .57½- —
tanks, dlvd. ..... lb. .54 - —

C

Cacao butter (see Cocoa butter).
Cadmium CP red dark shade, bbls., frt. alld E of Rockies lb 5.55 - —
Light shade, bbls., same basis lb 4.65 - —
medium shade, bbls., same basis lb. 5.30 - —
Medium light shade, bbls., same basis lb 4.90 - —
Orange-red shade, bbls., same basis lb 4.30 - —
Yellow, all shades, bbls. frt. alld E. of Rockies lb. 2.95 - —
Cadmium chloride, 400-lb. dms., f.o.b. shipping point lb. 1.49 - —
Cadmium iodide, 25-lb fib dms lb 6.75 7.00
Cadmium metal, ingots or sticks, ton lots, cs., dlvd lb. 1.60 - —
Cadmium nitrate, purif. cryst., 400-lb. dms., less than 5,000 lbs., f.o.b. shipping point, lb. .89 - —
400-lb. dms., 5,000 lbs. or more, same basis lb. .87 - —
Cadmium-mercury lithopone orange, deep shade, bbls., frt. alld E. of Rockies lb. 1.70 - —
Cadmium-mercury lithopone red, dark shade, bbls., same basis lb. 2.00 - —
Red, light shade, bbls., same basis lb. 1.77 - —
Red, medium shade, bbls., same basis lb. 1.92 - —
Red, medium light shade, bbls., same basis lb. 1.85 - —
Red, maroon shade, bbls. same basis lb. 2.08 - —
Cadmium-selenide lithopone maroon, bbls., frt alld E of Rockies lb. 2.81 - —
Orange, bbls., same basis .... lb. 1.63 - —
Cadmium-selenide lithopone red, orange-red shade, bbls., same basis lb. 1.77 - —
Red, dark shade, bbls. same basis lb. 2.61 - —
Red, light shade, bbls., same basis lb. 1.63 - —
Red, medium shade, bbls. same basis lb. 2.28 - —
Red, medium-light shade, bbls., same basis lb. 2.05 - —
Cadmium-selenide, lithopone, yellow, all shades, bbls. frt alld E. of Rockies lb. 1.24 - —
Caffeine, NF citrated, dms. 100 lb. lots or more lb 2.70 - —
USP, nat., cryst. anhyd., dms., 100-lb lots or more lb 2.10 - —
Caffeine, USP, nat., cryst. hydrous, dms. 100-lb lots or more, lb 1.96 - —
Caffeine, USP, syn., anhyd., dms., 100-lb. lots or more lb. 2.10 - —
cryst. hydrous dms. 100-lb lots or more lb 1.96 —
Cajuput oil, native cns. ..... lb 1.75 2.00
Redist. USP cns ..... lb 1.90 2.10
Calamine, USP dms. ..... lb. .34 —
Calamus oil, bots ..... lb.12.00 -20.00
Calciferol, cryst., 10-kilo or more lots, works gram .54 - —
1-10 kilo lots gram .55 - —
Calciferol in edible oil (see Viosterol).
Calcium p-aminosalicylate trihydrate, fib dms. 100 lbs. or more frt adjusted lb 3.10 - —
Calcium bromide, NF, jars 100 lbs. or more lb. 1.10 - —
Calcium carbide, standard generator size, 600-lb dms. c.l., dlvd ton.149.00 - —
Calcium carbonate, nat., dry grd., air floated, 325 mesh, bgs. c.l. works ton.10.50 - —
Calcium carbonate, chalk, whiting, 325 mesh, bgs c.l. works ton.32.00 -34.00
water-grd, ½ to 10 microns, bgs., c.l. works ton.30.00 —
10 to 20 microns bgs., c.l., works ton.17.00 -18.00
Calcium carbonate, precip., dense, bgs., c.l., works ton.30.00 -38.50
bgs. t.c.l., works ton.45.00 -53.50
medium, bgs. c.l. works ton.38.00 —
bgs. t.c.l. works ton.48.00 -53.00
Calcium carbonate, surface treated, bgs. c.l., works ton.42.00 -44.00
bgs., t.c.l., works ton.57.00 -59.00
ultrafine, bgs. c.l., works.ton 117 50 -167 50
bgs t.c.l. works ton.137 50 -187.50
Calcium chloride, conc. flake or pellet 94-97%, paper bgs., c.l. works, frt equald ton.39.30 - —
Flake, 77-80%, paper bgs., c.l., works, frt equald ton.32.00 - —
Liquor, 40% tanks frt equald ton.12.50 - —
Powd., 77% min., paper bgs., c.l., works frt equald ton.37.00 - —
Purif., gran dms lb .27 —
Calcium chloride, solid, 73-75%, dms., c.l., frt. equald ton.30.50 - —
dms., t.c.l. works frt. equald. ton.36.00 -73.00
USP, gran. dms lb 32 —
Calcium chromate, bgs., dlvd lb. .37 —
Calcium cyanide dms., c.l. dlvd E. of Rockies lb. .20 —
dms., t.c.l. same basis lb. .24 - .55
Calcium cyclamate, 100-lb dms lb. 1.95 —
Calcium gluconate, USP, AA grade, 100-lb dm., ton lb. 73½- —
USP powd 100-lb dm ton lb. .66½- —
Calcium hydride, lump dms. works. lb. 2.20 3.00
Calcium hypochlorite, high test, gran. 45-lb cs., dlvd E. of Rockies cs.23.85 -25.60
100-lb dms same basis dm.33.30 -36.55
Calcium hypophosphite, dms., 1,000-lb lots lb. 1.28 —
Calcium iodide, 25-lb. jars, works. lb. 4.27 - —
Calcium lactate, NF, dms., f.o.b. works lb. .43 - .46
Calcium mandelate, USP, 150-lb. dm. works lb. 3.25 - —
Calcium naphthenate, liq. 4% Ca., dms. frt equald lb. .30 - —
Calcium pantothenate, USP, jars, 1 kilo or more kilo.35.00 - —
Calcium para-aminosalicylate (see Calcium p-aminosalicylate).
Calcium phenosulfonate, dms lb. 1.24 1.25
Calcium phosphate, dibasic, USP, bgs. c.l. frt equald 100 lbs.16.00 - —
Dibasic, feed grade, 18½% P, bgs., c.l., t.l., Bonnie, Fla., frt. equald ton.81.00 - —
bgs. c.l., t.l., f.o.b. Texas City works ton.75.50 - —
bgs., t.c.l., ton 96.00 - —
Calcium phosphate, dibasic, feed grade, 21% P., bgs., c.l., t.l., frt. equald ton.97.65 - —
bgs., t.c.l. frt equald ton.107.65 - —
Prices of calcium phosphate dibasic in bulk $3 per ton less than bgs. c.l. prices.
Calcium phosphate, monobasic, bgs., 10,000-lb lots, frt equald. 100 lbs. 7.45 - —
bgs., smaller lots, same basis. 100 lbs. 7.95 - —
Tribasic, NF, precip., bgs., c.l., works, frt. equald 100 lbs. 9.25 - —
bgs. t.c.l., frt. equald 100 lbs.10.00 - —
Calcium propionate, any quantity, dms., dlvd E of Rockies. lb. .34½- —
Prices W of Rockies 3c. per lb. more.
Calcium phytate, bgs., 50 lbs. or more f.o.b. warehouse N Y lb. .39 - —
Calcium resinate, precip., dms., frt. alld., works lb. .45 - —
Calcium silicate, hydrated, bgs., c.l., works lb. .06 —
bgs., t.c.l., works lb. .06½- —
Calcium silicate paint grade (see Wollastonite).
Calcium stearate, ctns., c.l. ..... lb. .39 —
ctns., t.c.l. .....lb. .40 - .44

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Calomel NF mild, powd., dms., 100-lbs., f.o.b. works lb 4.32 - —
NF mild, precip., dms., 100-lbs., f.o.b works lb. 5.67 - —
Camphene, 46° m.p., dms incl., c.l., works lb. .15 - —
dms incl., l.c.l., same basis lb. .16½- —
tanks, same basis lb. .12½- —
Camphene chlorinated, 67-69% (see Toxaphene)
Camphor, monobromated, NF, dms., kgs lb. 3.63 3.70
Camphor, syn., tech., 1 bbl. or more, lb. .45 - —
USP, gran., powd., bbls., 1,000-lb lots lb. .53 - —
bbls. smaller lots lb. .54 - —
tablets, ctns., 1,000-lb. lots, lb. .80 - —
ctns., 500-lb. lots lb. .81 - —
ctns., smaller lots lb. .82 - —
Camphor oil, sassafrassy, dms. lb. .35 - .55
White, dms. lb. .26 .50
Cananga oil, native, cns. lb 5.00 6.50
Rectified, cns. lb. 7.25 -10.00
Candelilla wax, crude, bgs. lb. .57 - .58
Refd., pure, bgs lb. .62 - .63
Powdered Candelilla wax 20 to 100 mesh, 8c. higher.
Cantharides, Chinese, cs. lb. 1.00 - —
powd., bgs. lb. 1.15 - —
Russian, bgs. lb 2.00 2.15
powd., bgs. lb. 2.15 2.30

Capric acid, dms lb. .27¼- .29¾
tanks lb. .24¾- —
Caprolatam monomer, bgs., c.l., t.l., f.o.b. works lb. .52 - —
bgs., l.c.l., l.t.l., same basis lb. .57 - —
tanks, same basis lb. .49 - —
Capryl alcohol, 85% dms., c.l., t.l., works lb. .19 - —
dms., l.t.l., same basis lb. .19½- —
tanks, frt. equald. lb. .16½- —
Sec., 92-99%, dms., c.l., f.o.b. works lb. .22 - —
dms., l.c.l., f.o.b. works lb. .23 - —
tanks, f.o.b. works lb. .19½- —
Caprylic acid, dms lb. .27¼- .29¾
tanks lb. .24¾- —
Capsicum (see Pepper red).
Capsicum oil (see Capsicum oleoresin).
Capsicum oleoresin, NF, from dom. pepper, dms lb. 4.00 - —
NF, from African pepper, dms. lb. 4.50 - —
Caraway oil, NF, dms lb. 3.75 - —
Caraway seed, Danish, bgs. lb. .16 - —
Dutch, bgs. lb. .19 - —
Carbazole, 97%, bbls, ton lots, works lb. 1.05 - —
Carbon black, channel, rubber beads, bulk, c.l., works lb. .08 - —
bgs. c.l., works lb. .08½- —
bgs., l.c.l., works lb. .16¼- —
Carbon black, furnace, fast extruding, bgs., c.l., works lb. .08¾- —
ctns., l.c.l., whse. lb. .13½- —

Carbon black, high abrasion, burst, c.l., works lb. .07¼- —
bgs., c.l., works lb. .07¾- —
bgs., l.c.l., dlvd. or whse. lb. .14½- —
high modulus, bgs., c.l., works, lb. .06¼- —
ctns., l.c.l., whse. lb. .13 - —
semi-reinforcing, bgs., c.l., works lb. .05¾- —
bgs., ctns., l.c.l., whse. lb. .12½- —
Carbon black, pigment, high color beads, ctns., c.l., works lb. .78 - —
ctns., l.c.l., dlvd. or whse. lb. .87 - —
medium color, uncompressed, bgs., c.l., works lb. .14 - —
bgs., l.c.l., dlvd. or whse. lb. .22½- —
Carbon dioxide, indust., wholesale, bulk, 30,000-2,999,999 lbs., dlvd. Metropolitan areas, E ton 60.00 -115.00
bulk, 3,000,000 lbs. or more, dlvd Metropolitan areas, E. ton 55.00 - —
Solid, bulk, wholesale, works ton 85.00 - —
Carbon disulfide, 55-gal. dms., c.l., works, frt. equald to competitive points lb. .071 - —
55-gal. dms., l.c.l., same basis lb. .086 - .091
5-gal. dms., 30 dms. to c.l., same basis lb. .131 - —
5-gal. dms., less than 30 dms., same basis lb. .161 - —
tanks, dlvd. lb. .0520- —
Carbon tetrachloride, CP, consumers, dms., c.l., frt. alld. lb. .12¾- —
dms., l.c.l., frt. alld. lb. .15¼- —
Tech., consumers dms., c.l., t.l., frt. alld lb. .11¾- —
dms., l.c.l. l.t.l., frt. alld lb. .14¼- —
tanks, frt alld lb. .10¾- .11¼
Carboxymethyl cellulose (see CMC).

Carbromal, NF, dms., 100-lb lots, works lb. 4.60 - 4.22
dms., smaller lots, works lb. 4.10 - 4.78
Cardamom oil, NF, bots lb. 43.00 -45.00
Cardamom seed, bleached "A" lb. 3.45 - —
Bleached "B" lb. 3.15 - —
Decorticated Alleppey, cs lb. 2.70 - —
Guatemala, cs. lb. 2.10 - —
Green, Alleppey, bgs lb. 2.10 - —
Ceylon, bgs. lb. 2.10 - —
Carmine No. 40, NF, bulk, 100-lb. lots or more, dlvd. lb. 16.80 - —
bulk, smaller lots, dlvd. lb. 16.90 -17.30
Carnauba wax, chalky, bgs., ton lots, lb. .70 Nom.
North Country, No. 2, crude, bgs., ton lots lb. .76 - .80
refd., pure, ton lots lb. .85 - .87
North Country, No. 3, Ceara, crude, ton lots lb. .64 - .65
North Country, No. 3, Parnahyba, crude, ton lots lb. .66 - .67
No. 3, refd., pure, bgs., ton lots. lb. .74 - .76
No. 1, Ceara, yellow, bgs., ton lots. lb. .94 - .96
Parnahyba, yellow, bgs., ton lots. lb. .95 - .96
Powdered carnauba wax, 20 to 100 mesh 8c per lb higher.
Carotene, tech., 1,350,000 A units per gram tins, 5-10 kilo lots, dlvd gram. .20½- —
in carrot oil, 5,000,000 to 8,000,000 A units per lb., dms., works million units. .12 - —
USP, microcrystalline in oil, 400,000 A units per gram., dms., dlvd million units. .144 - —
b-Carotene, in vegetable oil, semi-solid suspension, 400,000 A units per gram, cns kilo. 57.60 - —
b-Carotene, liquid in vegetable oil, 500,000 A units per gram, cns kilo. 72.00 - —
Pure, cryst., 1,600,000 to 1,670,000 A units per gram, cns. kilo. 240.00 —
Carvol, bots. lb. 5.00 5.40
Cascara sagrada bark, bulk lb. .32 - —
Casein, dom., edible, acid precip., 30 mesh, bgs., 10,000-lb. lots or more, works lb. .56 - —
edible, acid, precip., 80 mesh, bgs., 10,000-lb. lots or more, works lb. .64 - —
Imp., inedible, acid-precip., gro., Argentine, bgs., c.l., ex-dock Eastern seaports lb. .16¾- .17¼
Australian, bgs., c.l., same basis lb. .19¼- .19¾
New Zealand, same basis lb. .24 - .25
Cashewnut shell, liquid, treated, dms., c.l., Newark, N.J lb. .24 - —
dms. ton lots, same basis lb. .25 - —
t.w., same basis lb. .22½- —
Cassella acid, dms., frt. alld., 100% basis lb. 1.44 1.75
Cassia oil, redist., USP, cns lb. 7.50 9.00
Cassia, Padang, "A," bls lb. .31 - —
"B," bls. lb. .30 - —
"C," bls. lb. .29 - —
Korintje "A," bls lb. .29 - —
"B," bls. lb. .28 - —
"C," bls. lb. .27 - —
Castor oil, dom., blown, dms., c.l. lb. .2550- —
dms., l.c.l. lb. .2650- —
Castor oil, dom. dehydrated, bodied, dms., c.l lb. .2700- —
dms., l.c.l. lb. .2850- —
tanks lb. .2500- —
dehydrated, unbodied, dms., c.l. lb. .2500- —
dms., l.c.l. lb. .2660- —
tanks lb. .2360- —
hydrogenated, bgs., c.l. lb. .2450- —
bgs., ton lots lb. .2850- —
bgs., l.c.l., dlvd. lb. .3050- —
Castor oil, dom., hydrogenated, No. 1, dms., c.l lb. .2200- —
dms., l.c.l. lb. .2300- —
tanks lb. .2000- —
No. 3, tech., dms., c.l. lb. .2125- —
dms., c.l., lb. .2225- —
tanks lb. .1925- —
Refd. deod., dms., c.l. lb. .2650- —
dms., l.c.l. lb. .2750- —
tanks lb. .2450- —
USP, dms., c.l. lb. .2350- —
dms., l.c.l lb. .2450- —
tanks lb. .2150- —
Imported, No. 1, Braz., tanks lb. .17½- —
Sulfonated, 50%, dms., works lb. .15 - .15¼
75%, dms., works lb. .19 - .19½
Castor oil acids, dehydrated, dms. lb. .41¼- .43¼
Split, dms. lb. .33¾- .34¾
Castor pomace, bgs., c.l., works ton 35.00 - —
Castoreum nat., cns. lb. 5.25 - —
Syn., cns. lb. 9.00 - —
Catechol, CP, eryst., fib., dms., works lb. 2.17½- —
Resub., dms., works lb. 4.29½ —
Catnip leaves, Southern, bls lb. Nominal.
Caustic potash (see Potash caustic).
Caustic soda (see Soda, caustic)
Cedarleaf oil, USP XIII cns., dms. lb. 3.25 3.50
Cedarwood oil, cns., dms. lb. 1.00 - —
Celery seed, French, bgs lb. .36 - —
Indian, bgs. lb. .21 - —
Cellulose acetate, flake, powd., bgs., t.l., dlvd E lb. .36 - .51
Cellulose acetate-butyrate, powd., 17% butyryl content, bgs., dlvd E lb. .543 .553
27% butyryl content, bgs. dlvd. E lb. .595 .605
38% butyryl content, bgs. dlvd. E lb. .545 .555
38% butyryl content, half-second, bgs., dlvd E lb. .545 .555
50% butyryl content, bgs. dlvd. E lb. .585 - .595
Cellulose gum, methyl (see Methyl Cellulose)
Cellulose gum, pure, high vis., bgs., 23,000-lb lots or more works, frt alld lb. .57 - —
bgs., smaller lots, same basis lb. .59 - —
Cerium hydrate 74% CeO, fib dms., 100-lb. lots or more lb. 1.40 - —
77% CeO, fib dms., 100-lb lots or more lb. 1.74 - —
Cerium oxalate (see Rare earth oxalate)
Cerium oxide, optical grade, bgs., 50-lb lots or more, dlvd. lb. 1.85 - 1.90
bgs., smaller lots, dlvd. lb. 2.15 —
Cetyl alcohol, NF, fib cns., c.l., t.l., dlvd E lb. .41½- —
fib cns., l.c.l., same basis lb. .43½- —
tanks, same basis lb. .39 - —
Extra, cns., c.l., t.l., dlvd E lb. .48½- —
fib cns., l.c.l., same basis lb. .50½- —
tanks, same basis lb. .46 - —
Chalk (see Calcium carbonate)
Chamomile flowers, Hungarian, lb. .85 - 1.00
Roman, cs. lb. 1.50 - 1.75
Chamomile oil, blue Hungarian, bots lb 350.00 —
Charcoal, activated NF, fib dms., c.l., works lb. .34 - —
fib, dms., 8-ton lots, works lb. .35 - .35½
fib, dms., smaller lots, works lb. .36 - .50

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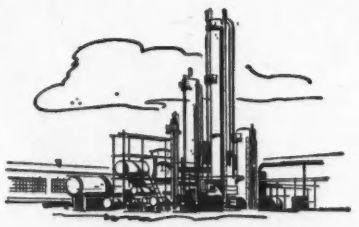

*This statement was contained in an engineer's report concerning the use of CO_2 as a coolant by a company that sulfunates straight chain alcohol. CO_2 sparged directly into the chemicals in the reaction tank, maintains a controlled temperature of -70° F or below. Total time for cooling *55 minutes . . . former time 3 to 4 hours.*

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Chill grinding of animals' glands for hormones, etc.
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Sparging of varnishes and other mixtures.
Distillation vehicle in distillation of phthalic anhydride in manufacture of resins.
Flushing out lacquer from TV tube interiors after optical coating.
Inert pressure medium.

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Charcoal, black (see Charcoal, activated).
Charcoal, bone (see Bone black).
Charcoal, hardwood, lump, bulk, c.l., f.o.b. plant ton 55.00 - —
briquets, bulk, c.l., f.o.b. plant ton 80.00 - —
5-lb. paper bgs., c.l., same basis ton 106.00 - —
20-lb. paper bgs., c.l., f.o.b. plant, ton 90.00 - —
40-lb. paper bgs. c.l., same basis ton 86.00 - —
Chenopodium oil, NF, cns lb. 4.75 - 5.00
Chicago acid, paste, bbls., frt. alld. lb. 3.21 - —
Chinawood oil (see Tung oil).
Chloral, tech., 94% min., dms., c.l., works lb. .23 - —
dms., l.c.l., works lb. .24 - —
tanks, multiple units, 5 cars, dms., l.c.l., works lb. .21 - —
Chloral hydrate, USP, jars, 1,000-lb. lots lb. 1.00 - —
jars, 500-lb lots lb. 1.03 - —
jars, 100-lb. lots or less lb. 1.05 - —
Chlordan, agricultural dms., c.l., frt. alld lb. .65 - —
dms., l.c.l. 5,000-10,000-lb. lots, frt alld lb. .68 - —
Chlordan, clarified, dms., c.l., frt. alld lb. .69 - —
dms., l.c.l., 5,000-10,000-lb. lots, frt alld lb. .70 - —
Chlorinated paraffin, 40%., dms., c.l., frt. alld lb. .15 - —
dms. l.c.l. 10 dms or more, same basis lb. .16 - —
70%. dms., c.l., same basis lb. .18½- —
dms., l.c.l. 10 dms or more, same basis lb. .19½- —
Chlorinated rubber, 5, 10, 20 cps., ctns., c.l. works lb. .60 - —
ctns., l.c.l. works lb. .61 - —
125 cps. ctns. c.l., works lb. .70 - —
300 cps. ctns., c.l., works lb. .80 - —
Chlorine, liq., cyls., c.l., works, frt equald lb. .11 - —
cyls., l.c.l., Metropolitan area lb. .12½- .13¼
tanks, single units, works, frt. equald 100 lbs. 3.25 - —
tanks, multiple units, 5 cars, works, frt equald 100 lbs. 4.15 - —
tanks, multiple units, 4 cars, same basis 100 lbs. 4.35 - —
tanks, multiple units, 2 cars, same basis 100 lbs. 5.35 5.85
tanks, multiple units, 1 car, same basis⅝ 100 lbs. 6.25 7.25
Chloroacetic acid mono, flake, 99%, purif. dms., c.l lb. .23½- .25½
dms. l.c.l lb. .24½- —
tech., flake 96-97%, dms. c.l., frt. equald lb. .19 - —
dms. l.c.l. frt equald lb. .20 - —
2-Chloro-4-aminotoluene, tech., liq., dms., frt. alld lb. 1.03 - —
4-Chloro-2-aminotoluene, fused, bbls. lb. 1.38 - —
6-Chloro-2-aminotoluene, tech., liq., dms., frt. alld lb. .66 - —
m-Chloroaniline, dms., c.l., frt. alld. lb. .75 - —
dms., l.c.l., same basis lb. .77 - —
tanks, same basis lb. .73 - —
o-Chloroaniline, dms., c.l., frt. alld. lb. .52 - —
dms., l.c.l., same basis lb. .54 - —
tanks, same basis lb. .50 - —
p-Chloroaniline, dms., c.l., frt. alld. lb. .77 - —
dms., l.c.l., same basis lb. .79 - —
o-Chlorobenzaldehyde, dms., t.l., works lb .1.05 - —
dms., t.t.l., same basis lb. 1.20 - —
p-Chlorobenzaldehyde, dms., l.c.l., works lb. 1.95 - —
o-Chlorobenzoic acid, fib. dms., t.l., works lb. 1.10 - —
fib. dms., smaller lots, works lb. 1.25 - —
p-Chlorobenzoic acid, fib dms., 2,000-lbs. or more, works. lb. 2.25 - —
fib. dms., less than 2,000-lbs., same basis lb. 2.30 - —
Chloroform, tech., dms., c.l., divd. E lb. .18 - —
dms., l.c.l., same basis lb. .19 - —
tanks, same basis lb. .17 - —
Chloroform, USP, dms., c.l., divd. lb. .27 - —
dms., l.c.l., divd. lb. .30 - —
tanks, minimum 4,000 gals. divd. lb. .25 - —
3-Chloro-4-nitroaniline, paste, divd. E., 100% basis lb. .90 - —
Powd., divd. E., 100% basis lb. 1.00 - —
4-Chloro-2-nitroaniline, powd., divd. E lb. .86 - —
4-Chloro-2-nitrophenol, tech., paste, dms., frt. alld lb. .75 - —
4-Chloro-2-nitrotoluene, tech., solid, dms., frt. alld lb. .99 - —
6-Chloro-2-nitrotoluene, tech., solid, dms., frt. alld lb. .20½- —
o-Chlorophenol, dms., c.l., frt. equald lb. .37 - —
dms., l.c.l., same basis lb. .38 - —
p-Chlorophenol, dms., c.l., frt. equald lb. .37 - —
dms., l.c.l., same basis lb. .38 - —
Chloropicrin, comi., cyls., 180 lbs., frt alld lb. 1.07 - —
cyls., 100 lbs., same basis lb. 1.08 - —
cyls., 50 lbs., same basis lb. 1.14 - —
Chlorosulfonic acid, dms., c.l., frt. equald lb. .0465- —
dms., l.c.l., frt. equald lb. .0515- —
tanks, frt. equald lb. .0415- —
Chlorosulfonic acid, in stainless steel dms.½c. per lb higher
o-Chlorotoluene, tech. dms., t.l., works lb. .37 - —
dms., l.c.l., t.t.l., same basis lb. .38 - —
Choline bitartrate, 100-lb. dms., frt. equald lb. 1.25 - —
Choline chloride, 100-lb. dms., frt. equald lb. 1.25 - —
Choline dihydrogen citrate, 100-lb. dms., frt. equald lb. 1.25 - —
Chrome green, CP., dark, tight, medium blue content, 1-15%, bbls., divd E of Rockies. lb. .43 - —
blue content, 16-30%, bbls., same basis lb. .44 - —
medium blue content, 41-45% bbls., same basis lb. .44 - —
blue content, 45-49%, bbls., same basis lb. .45 - —
Chrome green, reduced color 25%, bbls., same basis lb. .20 - —
Chrome green prices 1c. higher W of Rockies.
Chrome orange, CP, bbls., divd. E of Rockies lb. .35 - —
Chrome orange prices 1c higher W of Rockies.
Chrome yellow, CP, bbls., divd E. of Rockies lb. .33 - —
Chrome yellow price 1c. higher W of Rockies.
Chromic acid, 99¾%, dms., c.l., works, frt. equald lb. .29½- —
dms., l.c.l., divd. N. Y. Metropolitan area lb. .30 - .31
Chromic acid, NF (see Chromium trioxide).
Chromium acetate, soln., 7½%, dms., 500-2,000-lb. lots, works. lb. .10 - —
Chromium fluoride, bbls., works lb. .51 - .53
Chromium oxide, hydrated, bbls., fib. dms., c.l., frt alld. lb. 1.20 - —
Pure, bgs., c.l., frt. alld lb. .44½- —
bgs., l.c.l., same basis lb. .45¼- —
Chromium trioxide, NF, bots lb. 1.15 - —
Cinchona bark, NF, red, broken, bgs lb. .25 - —
NF, yellow, broken, bgs lb. .35 - .40
Cinnamic acid, refd., bots lb. 2.50 3.50
Cinnamic alcohol, bots lb. 1.50 - 1.60
Cinnamic aldehyde, dms. lb. .80 1.00
Cinnamon, Ceylon, No. 2, bgs lb. .53 - —
Ceylon, No. "0000," bgs. lb. .73 - —
Cinnamon bark oil, bots lb. 42.00 - 48.00
Cinnamon leaf oil, crude, dms lb. 1.60 2.00
USP. (Cassia), cns., dms lb. 8.50 - 13.50
Citral, CP, bots lb. 4.50 - 5.00
Extra, bots. lb. 3.60 5.00
Syn., dms. lb. 7.25 7.40
Citric acid, USP, anhyd., fine gran., bgs., dms., c.l lb. .29½- .30
bgs., dms., 10,000-lb. lots, 1 shipt lb. .30 .30½
bgs., dms., smaller lots lb. .30½- .31
Citric acid, USP, hydrous, fine gran., bgs., dms., c.l lb. .27½- .28
bgs., dms., 10,000-lb. lots, 1 shipt lb. .28 .28½
bgs., dms., smaller lots lb. .29 .29½
Powdered citric acid ½c. per lb. higher.
Citronella oil, Ceylon, dms lb. 1.00 —
Java-type, dms. lb. 1.20 - 1.35
Citronellal, bots., dms. lb. 1.40 1.60
Citronellol, bots., dms. lb. 1.90 2.50
Citronellol, synthetic, dms lb. 1.70 —
Civet, artif., bots lb. 13.75 -15.00
Nat., bots oz. 8.50 -15.00
Clay, ball, dom., airfloated, bgs., c.l., Tenn ton. 17.50 -21.50
crushed shed moisture, bulk, c.l., Tenn ton. 8.00 -11.25
Imp., airfloated, bgs., c.l., Atl. port net-ton. 43.00 -47.00
lump, bulk, Atl. port net-ton. 31.50 -37.50
Clay, China, dom., dry-grd., airfloated, 99%, 325 mesh, Georgia, bgs., c.l., works. ton. 11.00 -17.00
Georgia, bgs., t.c.l., works. ton. 13.50 -22.50
Imp., white, lump, bulk, c.l., ex-dock, Philadelphia, Portland, Me long-ton. 23.00 -35.00
white, powd., bgs. c.l., ex dock. net-ton. 50.00 —
bgs., t.c.l., ex whse net-ton. 60.00 -70.00
Cleaners naphtha, petroleum, 105°F Flash, tankcars New Jersey and New York gal. 18 —
Group 3 gal. .12975- —
Houston, Texas gal. .145 —
140°F Flash, tankcars, New Jersey or New York gal. .205 - —
Group 3 gal. .154 - —
Houston Texas gal. .17 - —
Cleve's acid, tech., mixed, solid, dms., frt. alld lb. 1.05 - —
1.6, tech. solid dms. frt. alld lb. .77 - —
1.7, tech., dms. frt alld lb. 2.20 - —
Clove bud oil, USP, dms. lb. 2.65 - —
Cloves, Madagascar, bgs. lb. .35 - —
Zanzibar, bgs. lb. .37 - —
Clove leaf oil, crude, dms lb. 1.10 - —
CMC, crude, 96.4% tow or medium vis bgs., 23,000 lbs., dvld. E., 100% basis lb. .40 - —
96.4% tow, or medium vis., bgs., less than 23,000 lbs., divd. E., 100% basis lb. .42 - .50
65% tow or medium vis. bgs., c.l., dlvd. E., 100% basis lb. .40 - —
t.c.l., dlvd. E., 100% basis lb. .42 - 1.00
purif., high vis. (see Cellulose gum)
CMC, standard tow or medium vis., bgs., 23,000 lbs. works, frt. alld lb. .57 - —
bgs. smaller lots, same basis. lb. .59 - 1.00
CMC prices W. of the Rockies are 2c per lb lower and are on a works basis.
Coaltar, crude, resale for soln., tanks, works gal. .17 —
Refd., resale, indust., dms., c.l., ex whse gal. .35 - —
dms., t.c.l., ex whse gal. .39 - —
tanks works gal. .20½- —
Coaltar pitch, aluminum and carbon, bulk, works. ton. 42.00 - —
Indust., bulk, works ton. 44.00 - —
Core, bulk works ton. 40.50 - —
Fiber, bulk, works ton. 48.00 - —
Roofing, 140-155°F., Federal Specification RP-381 Type I tanks, works ton. 41.00 - —
Cobalt acetate, 23.1% Co., dms., dlvd lb 1.04 —

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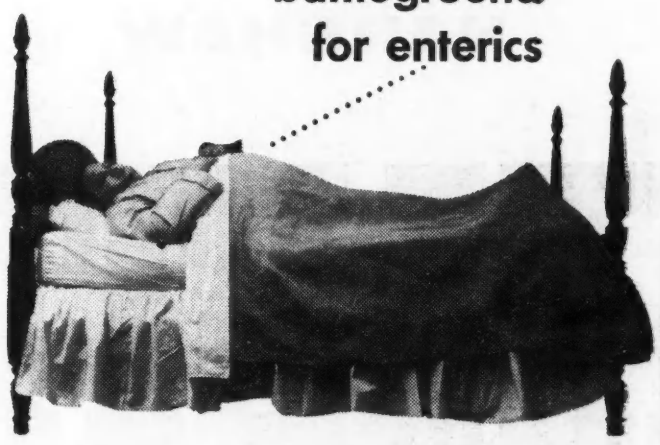

Tablets coated with *Eastman C-A-P Cellulose Acetate Phthalate* can be counted upon to withstand erosion by gastric juices and stomach motion. The resistance is uniform and predictable. It does not depend on a time schedule because you cannot assume that everybody's stomach empties with clockwork precision.

But once the tablet advances to the small intestine, the coating releases the contents regardless of whether the territory is acid, alkaline, or neutral. Disintegration of the coating is prompt even at a pH as low as 6.8, uniquely triggered by the hydrolytic action of the intestinal esterases.

And the predictability of *C-A-P* operates in pan as well as man. Coatings deposit evenly, dry quickly. Properly applied, such coats are of controllable thickness, hard to damage in tumbling, smooth and glossy.

It behaves uniformly in plant, package, and people because we make it in its own special works, under a strict regime of chemical synthesis. It has proved itself more than a billion dosetimes.

Conceivably, a new coat of *Eastman C-A-P Cellulose Acetate Phthalate* could help you bring a new product out or an old one back. If you have any to talk over, tell us: ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • W. M. Gillies, Inc., West Coast • Charles Albert Smith Limited, Montreal and Toronto.

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DPi

Also...vitamins A and E...distilled monoglycerides ...some 3800 Eastman Organic Chemicals for science and industry

Distillation Products Industries *is a division of* **Eastman Kodak Company**

Cobalt Blue—Cumin Seed Oil

Cobalt blue, genuine, 250 lb. bbls., dlvd. E of Rockies	lb.	4.90	—
Cobalt blue prices 1c. higher W. of Rockies			
Cobalt blue, imitation (see Ultramarine blue).			
Cobalt carbonate, 48% Co., powd., bgs., dlvd	lb.	1.45	—
Cobalt chloride, 24.2% Co., dms., dlvd	lb.	.93	—
Cobalt hydrate, 60-61% Co., dms., dlvd	lb.	1.97	—
Cobalt linoleate, fused 8½% Co., dms	lb.	.71½-.75	—
Liq., 6% Co., dms	lb.	.57½-	—
Cobalt metal, 99% dms., f.o.b. carrier	lb.	1.50	—
Cobalt naphthenate liq., 6% Co., dms., dlvd	lb.	.48¾-	—
Cobalt nitrate 20.1% Co., bbls., dlvd.	lb.	.75	—
Cobalt oxide, black, ceramic grade, 72½ 73½% Co., kgs., dlvd E of Mississippi R.	lb.	1.15	—
70-71% Co kgs. same basis	lb	1.12	—
Cobalt oxide prices W of Mississippi R. 3c. per pound higher			
Cobalt phosphate powd., 32.1% Co., dms., dlvd	lb.	1.35	—
Cobalt resinate, fused 3% Co. dms	lb.	.38½-	—
Cobalt sulfate, cryst., 21% Co., dms., dlvd	lb.	.64	—
Monohydrated, 33% Co., dms., dlvd	lb.	1.09	—
Cobalt tallate, 6% Co., dms., dlvd.	lb.	.44	—
Cocaine, USP. cns., 100-oz. lots, f.o.b. works	oz.	17.50	—
Cocaine hydrochloride, cns., 100-oz. lots f.o.b. works	oz.	13.75	—
Cocillana bark, bls.	lb.	.18	.20
Cocoa butter, bgs.	lb.	.56	.61
Coconut oil, crude, tanks, New York	lb.	.13¾-	—
tanks, Pac. coast	lb.	.12⅝-	—
Refd., deodorized, dms.	lb.	.19¼-	.20¼
Coconut oil acids, dist., dms.	lb.	.21½-	.24
tanks	lb.	.19	—
double dist. (stripped), dms.	lb.	.22½-	.25
tanks	lb.	.20	—
Cod oil, dms. spot	lb.	.08⅜-	.08½
Codeine, NF, cns., 100-oz. lots	oz.	13.25	—
Codeine hydrochloride cns., 100-oz. lots	oz.	11.75	—
Codeine phosphate, USP, cns., 100-oz. lots	oz.	10.25	—
Codeine sulfate. USP cns., 100-oz. lots	oz.	10.75	—
Codliver oil, USP, dms.	gal	1.40	1.70
Cohosh root, black, bls.	lb	.20	.25
Blue bls	lb	.20	.25
Colchicine, USP, bots.		27.50	-29.00
Colchicum rust, bls	lb	.35	.45
Colchicum seed, bgs.	lb.	.85	- .90
Collodion, USP, dms.	lb.	.32½-	—
USP flexible dms.	lb.	.34	—
Colocynth pulp, bls.	lb.	.75	—
Colombo root, bls	lb.	.16	.18
Condurango bark bls.	lb.	.18	.20
Congo copal gum, No. 1, bgs.	lb.	.26	.27
No. 2, bgs.	lb.	.23	.25
No. 3, bgs.	lb.	.21	.24
Copaiba balsam, cns., dms.	lb.	.80	.90
Copaiba oil, cns.	lb.	1.35	2.00
Copper acetate. bbls., c.l., works	lb.	.53	—
bbls., l.c.l., works	lb.	.54	—
Copper carbonate, 55%, dark dense, works	lb.	34.35	—
bgs., l.c.l., works	lb.	35.85	—
Copper chloride, cupric, anhyd., dms., works	lb.	.43½-	.44
cryst., dihydrate, dms., works.	lb.	.29¾	.30¼
cryst., dried, dms., works	lb.	.37¾-	.38½
Copper chloride, cuprous, dms., works	lb.	.3855-	.4155
Copper cyanide, tech., dms., 20,000-lb lots or more	lb.	.609	—
dms., 1,000-lb lots or more	lb.	.619	—
dms., smaller tots	lb.	.639	.65
Copper gluconate, dms	lb.	3.20	—
Copper hydrate dry, dms. c.l., frt. E. of Miss	lb.	.52½-	—
dms., l.c.l., same basis	lb.	.53	—
Copper metal, electrolytic, dlvd. Valley, basis	lb.	.29	—
Copper naphthenate, liq., 8% Cu, dms. frt alld	lb.	.26½-	—
Copper nitrate, tech., cryst., dms., works	lb.	.30¾	.32¾
Copper oleate, solid, 8% Cu, dms., works	lb.	.45	—
Copper oxide black bbls., 100-5,000-lb. lots, works	lb.	.46	—
Copper oxide, red, 97%, USN Type I, bbls., 100-5,000-lb lots, works	lb.	.46½-	—
90%, USN Type II, bbls., 100-5,000-lb lots or more, works	lb.	.45½-	—
Copper quinolinolate, 18% Cu, dms., ton lots	lb.	4.25	—
10% active quinolinolate, dms	lb.	1.14	1.18
Copper resinate, precip., dms., frt. alld	lb.	.47	—
Copper sulfate, CP, gran., dms., works	lb.	.1885-	—
Cryst., 99%, bgs., c.l., works.	100 lbs.	12.00	—
bgs., l.c.l., works	100 lbs.	12.50	-15.00
Copper sulfate, monohydrated, 35%, dms., c.l., works	100 lbs.	22.65	—
dms., l.c.l., works	100 lbs.	23.40	—
Tribasic, distributors, bgs., c.l., works	100 lbs.	29.10	—
bgs., l.c.l., works	100 lbs.	30.60	—
Copper undecylenate, dms	lb	2.75	—
Copra, Atl., Gulf ports, c.i.f.	ton.	177.50	—
Pac. ports, c.i.f.	ton.	172.50	—
Coriander oil, USP, bots.	lb.	6.50	7.25
Coriander seed, Moroccan, bgs.	lb.	.18	—
Rumanian, bgs.	lb.	.14	—
Yugoslavian bgs	lb.	.08½	—
Corn oil, crude, tanks, works	lb.	.16	—
Foots (soapstock) acid, 95%, tanks, New York	lb.	.05½	Nom.
Refd., salad, dms.	lb.	.2173-	.22
tanks	lb.	.1973-	—
Corn oil acids, dist., dms.	lb.	.14¾-	.17¼
tanks	lb.	.12¼-	—
Corn sugar, tanners, chipped, paper bgs. c.l. 60,000 lbs. min.	100 lbs.	7.30	—
paper bgs., l.c.l.	100 lbs	7.45	—
Corn syrup, 43° Be., tanks, dlvd. N.Y.	100 lbs.	6.30	—
non-ret. dms., c.l., same basis.	100 lbs.	7.23	—
Corrosive sublimate (see Mercuric chloride).			
Cortisone acetate, USP bots., kilo or more	gram	.93	1.75
Costus oil, bots	oz	6.00	—
Cottonseed meal, 41%, bgs. Mem phis	ton.	54.00	-54.50
Cottonseed oil, crude, tanks South, East	lb.	.12¼-	.12½
tanks, Valley	lb.	.12¼-	—
tanks, Texas, Lubbock	lb.	.12¼-	—
tanks, Texas, Waco	lb.	.12¼-	—
Foots (soapstock), acid, 95%, tanks, Texas, Waco	lb.	.03½-	—
Refd., salad, dms.	lb.	.18	- .18¼
tanks Salad, dms.	lb.	.16	- .16¼
Cottonseed oil acids, dist., dms	lb.	.14¾-	.17¼
tanks	lb.	.12¼-	—
Coumarin, NF, cryst., dms	lb	3.30	3.40
Cramp bark, NF bls	lb.	.90	1.00
Cream of tartar (see Potassium bitartrate)			
Creosote carbonate NF bots. chys.,	lb.	3.05	3.26
Creosote, coaltar, crude, tanks, works, frt. adjusted	gal.	.24	—
Crude, soln 80%, tanks, works.	gal.	226	—
Refd., dms., c.l., works	gal.	50	—
dms., l.c.l., same basis	gal	62	—
tanks, same basis	gal	38	—
West Coast creosote prices computed on a basis of 24c. per gallon for straight oil and 20c per gallon for coaltar			
Creosote, beechwood, chys., dms., f.o.b. works, dlvd. in Metropolitan area	lb.	1.72	1.77
Hardwood, NF chys., dms. same basis	lb.	1.42	1.47
Pinewood dms., incl. c.l., works.	lb.	.0611-	—
dms. incl., l.c.l., works	lb.	.0684-	—
dms. incl., l.c.l. ex whse, New York	lb.	.0795-	—
tanks, works	lb.	.0511-	—
Creosote oil (see Creosote coaltar).			
Cresol, tech. 50% below 204°C., dry above 207°C., wide distillation range non-ret. dms., c.l., frt. alld	lb.	.16½-	—
non-ret dms., l.c.l., same basis	lb.	.17½-	—
tanks, same basis	lb.	.145	—
Cresol, USP, 50% 204°C. dry above 207°C., wide distillation range, non-ret. dms., c.l., same basis	lb.	.18	—
non-ret. dms., l.c.l. same basis,	lb.	.19	—
tanks, same basis	lb.	.16	—
m-Cresol, 95-98% dms., c.l., works.	lb.	.60	—
dms., l.c.l., works	lb.	.61	—
m-p-Cresol, 5-95% 3°C., dms., c.l., frt. equald	lb.	.18	—
dms., l.c.l., same basis	lb.	.19	—
tanks, same basis	lb.	.16	—
2.97% 2°C. dms. c.l. frt equald.	lb.	.22	—
dms., l.c.l., same basis	lb.	.23	—
tanks same basis	lb.	.20	—
o-Cresol 30.5°C. m.p and over, ret., dms c.l., frt equald	lb.	.17	—
ret dms., l.c.l., same basis	lb.	.18	—
tanks, same basis	lb.	.15	—
30°-30.49°C m.p., dms., c.l., frt. equald	lb.	.16½	—
ret. dms., l.c.l., same basis	lb.	.17½	—
tanks same basis	lb.	.14½	—
Cresol, 29°-29.9°C. m.p., dms., c.l., frt equald	lb.	.16	—
ret. dms., l.c.l., same basis	lb.	.17	—
tanks, same basis	lb.	.14	—
25°-28°C m.p. dms. c.l., frt. equald	lb.	.15	—
ret. dms., l.c.l., same basis	lb.	.16	—
tanks, same basis	lb.	.13	—
p-Cresol 98% dms. c.l., dlvd	lb.	.52	—
dms., l.c.l., dlvd	lb.	.53	—
tanks, dlvd	lb.	.49	—
2,3-Cresotic acid dms., ton lots, works	lb.	70	—
dms., smaller lots, works	lb.	72	—
p-Cresyl methyl ether, cns	lb.	1.80	2.05
Cresylic acid, coaltar, dom., metapara content above 25%, resins and tricresyl phosphate grades dms., c.l., t.l. frt equald	gal.	1.35	—
dms., l.c.l., same basis	gal.	1.40	—
tanks, same basis	gal	1.15	—
metapara content 25% or less, dms. c.l. t.l. same basis	gal.	1.20	—
dms., l.c.l., same basis	gal.	1.25	—
tanks, frt equald	gal.	1.00	—
Cresylic acid, coaltar, imp., metapara content 25% or less, f.o.b works, frt. equald, to competitive points, 50 dms or more,	gal.	1.03½-	—
less than 50 dms., same basis	gal.	1.05	1.15
tanks, same basis	gal.	1.00	—
Crotonaldehyde 91-93% dms., l.c.l. works	lb.	.25	—
Crotonic acid, dms., 200 lbs or more, l.c.l., dlvd	lb.	.36	—
Cryolite, nat. indust., bgs., c.l., works 100 lbs.		13.00	—
bgs. l.c.l. works 100 lbs.		14.25	—
Cube root, powd. 5% rotenone, bgs., t.l., works	lb	.21	—
bgs. l.t.l. works	lb	.22	—
Cubeb berries, NF, bgs.	lb.	1.30	—
Powd., cs.	lb.	1.45	—
Cubeb oil, cns.	lb	8.75	- 9.00
Cumene dms., c.l., works	lb	.12	—
dms., l.c.l., works	lb	.14	—
tanks, works	lb	.11	—
Cumin seed, Iranian, bgs.	lb.	.9	—
Moroccan, bgs.	lb.	.36	—
Turkish, bgs.	lb.	.8	—
Cumin seed oil, bots., cns.	lb.	15.50	-17.00

HARSHAW

MELETEX

WATER DISPERSED DRIERS FOR WATER DISPERSED PAINTS

Completely free of volatile solvents
uniform and stable water dispersion
of very finely divided Metal Naphthenates
MELETEX Driers
exceedingly effective and readily used
in Emulsion Paints and Latex Compounds
to meet modern demands for high quality films:

MELETEX COBALT	5%*
MELETEX LEAD	20%*
MELETEX MANGANESE	5%*

IMMEDIATE ATTENTION
will be given your particular requirements for drying or curing any water-thinned film forming product.

*Pat. Pending

SAMPLES
and further information will be gladly furnished ON REQUEST.

HARSHAW

THE HARSHAW CHEMICAL COMPANY
1945 EAST 97TH STREET • CLEVELAND 6, OHIO
CHICAGO • CINCINNATI • CLEVELAND • DETROIT • HOUSTON • LOS ANGELES
HASTINGS-ON-HUDSON, N. Y. • PHILADELPHIA • PITTSBURGH

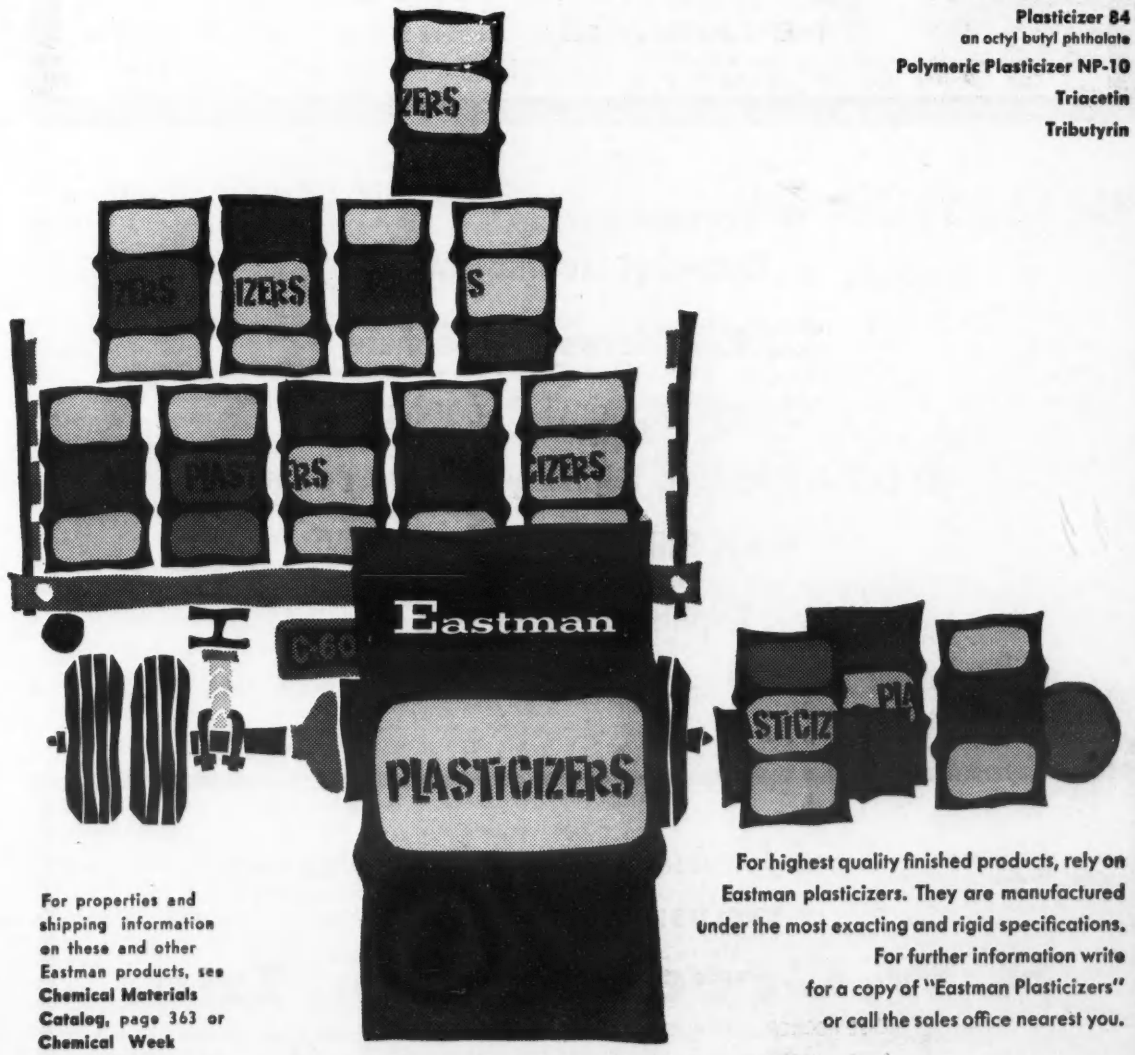
Cyanamide, fertilizer, mixing grade, 21% N, gran., bgs., Niagara Falls, Ont., contract. ton.57.00 • —
Fertilizer, pulv., 21% N, bgs., works unit-ton. 2.85 • —
Cyanamide, fertilizer, indust. grade, bgs, c.l., works ton.75.00 • —
bgs., l.c.l., works ton.96.00 • —
Indust. grade, 6-16 mesh, dms., c.l., works ton.120.00 • —
dms., l.c.l., works ton.140.00 • —
Cyclohexane, 99%, tech., dms., c.l., dlvd. E of Rockies gal. 1.02 • —
dms., l.c.l., same basis gal. 1.10 • —
dms., c.l., dlvd. W of Rockies gal. .77 • —
dms., l.c.l., same basis gal. .85 • —
tanks, works gal. .55 • —
86% tech. 40-dm. lots or more, f.o.b works gal. .56 • —
5-39 dms., same basis gal. .60 • —
tanks, same basis gal. .36 • —
Cyclohexanol, tech., dms., c.l., works, frt. alld. E lb. .28½- —
dms., l.c.l. works, same basis. lb. .29½- —
tanks, works, same basis lb. .26 —
Cyclohexanone, tech., dms., c.l., works lb. .33½- —
dms., l.c.l. works lb. .34½- —
tanks, works lb. .31 · —
Cyclohexylamine, tech., dms., c.l., works lb. .49 • —
dms., l.c.l., works lb. .50 • —
tanks, works lb. .47 • —
Cypress oil, bots. lb. 5.30 · —

D

2,4-D tech. bgs., dms., c.l., works, frt. equald lb. .40 • —
bgs. dms. l.c.l., same basis lb. .45 · .49
2,4-D butyl ester dms. c.l., works. lb. .43 —
dms., l.c.l., same basis lb. .48 · .52
tanks, same basis lb. .42 · —
2,4-D isopropyl ester, dms., c.l., works lb. .43 · —
dms., l.c.l., works lb. .48 · .52
tanks, works lb. .42 · —
Dammar gum Batavia, A E, cs lb. No stocks.
East India Batu, bold, bgs lb. .15½ · .18
nubs and chips, bgs lb. .10 · .11
black, bold, bgs lb. .16 · .18
nubs and chips, bgs lb. .13 · .14½
unscraped, bgs. lb. .13 · .14½
pale, chips, bgs lb. .16 · .18
pale, nubs, bgs. lb. .20¾- .24
Siam cs lb. .31½- .34
Singapore, No. 1, bgs. lb. .38 · .44
No 2, bgs. lb. .29 · .32
dust, bgs. lb. .18 · .20
No 3, bgs. lb. No stocks.
Dandelion root, bls lb. .35 · .40
DDD, tech., flake, grd., fib. dms., c.l., works lb. .45 · .47
tib. dms., l.c.l., works lb. .46 · .48
DDT, flake or lump, bgs., c.l., dlvd lb. .23 • —
bgs., smaller lots, same basis. lb. .25 • —
fib. dms., c.l., same basis lb. .24 • —
fib dms., smaller lots, same basis lb .26 • —
Powdered DDT 1c. per pound higher.
DDVP (see Dimethyl dichlorovinyl phosphate).
1-Decanol, tech. dms., c.l., dlvd. E. lb. .43½- —
dms., l.c.l., dlvd. E. lb. .45½- —
tanks, dlvd. E. lb. .41 · —
Decyl alcohol, mixed isomers, dms., c.l., dlvd lb. .23½- —
dms., l.c.l., dlvd. lb. .25 · —
tanks, dlvd. lb. .21 · —
Perfume grade, bots. lb. 1.00 · 2.00
Decyl alcohol, normal (see 1-Decanol)
Deertongue leaves, bls. lb. .50 · .60
Defluorinated phosphate, feed grade. 14% P paper bgs., c.l., t.l., Tupelo, Miss ton.52.00 • —
18% P, paper bgs., c.l., Texas City ton.61.25 • —
paper bags, c.l., works, Miss. ton.66.00 • —
18% P paper bgs., c.l., t.l., works, Houston, Tex. ton.66.35 • —
Prices of defluorinated phosphate in bulk $3 per ton less than bg. c.l prices
Degras, common (15-17% free fatty acid), 400-lb. dms lb. .12 · .14
Neutral (over 2% free fatty acid), 400-lb dms lb. 13 · —
Denatured alcohol, ethyl, CD-12, CD-13, CD-14, CD-17, dms., c.l. dlvd E. of Rockies, gal. .69½- —
dms., l.c.l., same basis gal. .74½- .80½
tanks, dlvd. same basis gal. .53½- —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.
Denatured alcohol, ethyl, proprietary solvent, dms., c.l., dlvd. E. of Rockies gal. .72 · —
dms., l.c.l., same basis gal. .77 · .83
tanks, same basis gal. .56 · —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.
Denatured alcohol, ethyl, SD1, dms., dlvd E of Rockies gal. .70½- —
dms., l.c.l. same basis gal. .75½- .81½
Denatured alcohol, ethyl, SD1, tanks, same basis gal. .54½- —
SD2B, dms. c.l. dlvd. E. of Rockies gal. .69 · —
dms., l.c.l., same basis gal. .74 · .80
tanks, same basis gal. .53 · —
SD3A. dms. c.l., dlvd. E. of Rockies gal. .68 · —
dms., l.c.l. same basis gal. .73 · .79
tanks, same basis gal. .52 · —
Denatured alcohol, ethyl, SD23A, dms. c.l. dlvd. E. of Rockies gal. .70½- —
dms., l.c.l., same basis gal. .75½- .81½
tanks, same basis gal. .54½- —
Denatured alcohol, ethyl, SD23H, dms., c.l., dlvd. E. of Rockies gal. .71 · —
dms., l.c.l., same basis gal. .76 · .82
tanks, same basis gal. .55 · —
Denatured alcohol, SD29, dms., c.l., dlvd. E. of Rockies gal. .69½- —
dms l.c.l., same basis gal. .74½- .80½
tanks, same basis gal. .53½- —
SD30, dms., c.l. dlvd. E. of Rockies gal. .68 · —
dms., l.c.l., same basis gal. .73 · .79
tanks, same basis gal. .52 · —
Denatured alcohol, ethyl, SD-35A, dms. c.l., dlvd. E. of Rockies gal. .71 · —
dms., l.c.l., same basis gal. .76 · .82
tanks, same basis gal. .55 · —
Denatured alcohol, ethyl, SD-40, dms., dlvd. E. of Rockies gal. .70½- —
dms., l.c.l., same basis gal. .75½- .81½
tanks, same basis gal. .54½- —
For anhyd. alcohol on above formulas prices are 7c. per gal. higher.
West coast dlvd. prices are the same as eastern prices, except in Idaho, Montana, Oregon, and Washington where a 5c. differential on tankcars is maintained.
d-Desoxyephedrine hydrochloride, dms lb..15.00 -17.00
dl-Desoxyephedrine hydrochloride, dms lb. 6.80 • —
Dextrin, corn, gum, paper bgs., c.l., 100 lbs. 9.19 • —
100 lbs 9.34 • —
canary dark, paper bgs., c.l. 100 lbs. 9.03 • —
paper bgs., l.c.l. 100 lbs. 9.18 • —
indust. grade, 6-16 mesh, canary light, paper bgs., c.l. 100 lbs. 8.93 • —
paper bgs., l.c.l. 100 lbs. 9.08 • —
white paper bgs., c.l. 100 lbs. 8.77 • —
paper bgs., l.c.l 100 lbs. 8.92 · —
Corn dextrin in cotton bgs 15c per 100 lbs higher
Dextrose, anhyd., comi., bgs., c.l. 100 lbs 8.65 • —
bgs. l.c.l. 100 lbs 8.80 • —
Anhyd., special, aluminum foil lined fib. dms., 200-lb dms 100 lbs.14.70 • —
100-lb. dms. 100 lbs.15.20 • —
Hydrated, comi., bgs., c.l., ex whse 100 lbs 7.45 • —
bgs., c.l., ex whse 100 lbs. 7.60 • —
USP dms. lb. .19¾- —
Diacetone alcohol, acetone-free, dms. c.l., dlvd lb. .15½- —
dms., l.c.l., dlvd. lb. .17 · —
tanks, dlvd lb. .13 · —
Tech., dms., c.l., dlvd. lb. .15 · —
dms., l.c.l., dlvd. lb. .16½- —
tanks, dlvd lb. .12½- —
Diacetyl, flavor grade, bots lb. 3.30 4.30
Di-sec-amyl phenol, dms., c.l., works lb .32 · —
dms., l.c.l., works lb. .33 · —
tanks, works lb. .29½- —
Di-tert-amyl phenol, dms., c.l., works lb .32 · —
dms., l.c.l., works lb. .33 · —
tanks, works lb. .29¼- —
Diallylamine, dms., c.l., dlvd. lb .98½- —
dms. l.c.l., dlvd. lb 1.00 · —
tanks, dlvd lb .96 · —
o-Dianisidine dry, tech., fib. dms. lb 2.00 · —
Dibenzyl sebacate, dms., c.l., works. lb .93 · —
dms., l.c.l., same basis lb .94 · —
tanks, same basis lb .91 · —
Dibromobenzene, bgs., 500-lb lots. lb .55 · —
2,6-Di-tert-butyl-p-cresol, teed grade, c.l., t.l., dms., dlvd. lb .65 · —
l.t.l., dms., same basis lb .68 · —
Food grade, c.l. t.l. dms., dlvd. lb .65 · —
dms., l.t.l., same basis lb. .68 · 1.10
Tech., dms., c.l., t.l., dlvd. lb .57 · —
dms., l.c.l., same basis lb. .60 · —
tanks, same basis lb. .54 · —
Dibutyl fumarate, dms., c.l., t.l., dlvd. E lb. .31½- —
dms., l.c.l., l.t.l., dlvd. E lb. .33 · —
tanks, dlvd E lb. .29 · —
Dibutyl maleate, dms., c.l., t.l., dlvd. E lb. .31½- —
dms., l.c.l., l.t.l., dlvd. E lb. .33 · —
tanks, dlvd. E lb. .29 · —
Dibutyl phthalate, dms., c.l., dlvd. E lb. .31½- —
dms., l.c.l., same basis lb. .33 · —
tankcars, tanktrucks, 2,000 gals., same basis lb. .29 · —
tanktrucks, 1,000-1,999 gals., same basis lb. .29 · —
Dibutyl sebacate, dms., c.l., works. lb .67½ —
dms., l.c.l., works lb 68½ —
tanks, works lb 65½ —
Dibutyl tartrate, dms., works, frt. alld lb 65½ —
Dibutylamine, dms., c.l., dlvd lb 55½ —
dms., l.c.l., same basis lb 57 —
tanks, same basis lb 53 —
Dicapryl phthalate, dms., c.l., dlvd lb. .28½- —
dms., l.c.l., dlvd. lb. 30 —
tanks, dlvd. lb. .26 —
Dicapryl sebacate, dms., c.l., works lb 63 —
dms., l.c.l., works lb .63½ .64
tanks, works lb .61 —
2,5-Dichloroaniline, dms., works lb 83 —
3,4-Dichloroaniline, tech., solid, tanks, frt alld lb. 73 —
o-Dichlorobenzene, dms., c.l., trt. alld. E lb .12¾ —
dms., l.c.l., same basis lb .13¾ —
tanks, same basis lb .11 —
p-Dichlorobenzene, dms., c.l., f.o.b., works, frt. alld E lb. .12 —
dms. 2,000 lbs or more same basis lb. .14½- —
1,4-Dichlorobutane, dms., c.l., or t.l., works lb .33½- —
dms., l.c.l., or t.l., works lb .34 —
tanks, works lb .32 —
Dichlorodiphenyltrichloroethane (see DDT).

Eastman Plasticizers

Dimethyl phthalate
Diethyl phthalate
Di-(methoxyethyl) phthalate
Di-isobutyl phthalate
Dibutyl phthalate
Dibutyl sebacate
Dioctyl isophthalate (DOIP)
Dioctyl phthalate (DOP)
Dioctyl adipate (DOA)
Dioctyl azelate (DOZ)
Plasticizer 84
an octyl butyl phthalate
Polymeric Plasticizer NP-10
Triacetin
Tributyrin



For properties and shipping information on these and other Eastman products, see Chemical Materials Catalog, page 363 or Chemical Week Buyers Guide, page 107

For highest quality finished products, rely on Eastman plasticizers. They are manufactured under the most exacting and rigid specifications. For further information write for a copy of "Eastman Plasticizers" or call the sales office nearest you.

Eastman CHEMICAL PRODUCTS, INC.
KINGSPORT, TENNESSEE, subsidiary of EASTMAN KODAK COMPANY
SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Boston; Buffalo; Chicago; Cincinnati; Cleveland; Detroit; Greensboro, North Carolina; Houston; Kansas City, Missouri; New York City; Philadelphia; St. Louis.
Western Sales Representative: Wilson & Geo. Meyer & Company, San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

2,2-Dichloroethyl Ether—Dipentene

2,2-Dichloroethyl ether, dms., c.l., t.l., divd E lb. .15½- —
dms., l.c.l., t.t.l. same basis lb .17 · —
tanks same basis lb. .13 · —
Dichloroisocyanuric acid, dms., c.l., t.l. frt equald lb .65 · —
dms. l.c.l., same basis lb 75 · —
Dichloropentanes dist. dms., c.l., works lb 05 · —
dms., l.c.l., works lb 06 · —
tanks works lb 03 · —
Dichlorophenoxyacetic acid (see 2,4-D).
Dicyclohexylamine dms. c.l. works lb .54 · —
dms. l.c.l., works lb .55 · —
tanks works lb 52 · —
Dicyclohexyl phthalate, gran. fib. dms c.l. works frt alld. lb. .47½- —
fib. dms., l.c.l., same basis lb. .49 · —
Dicyclopentadiene dms. c.l., t.o.b. works lb 14½- —
dms., l.c.l., same basis lb. .14⅝- —
tanks same basis lb. .12 · —
Didecyl phthalate dms. c.l., works. lb. .28½- —
dms. l.c.l., same basis lb. .30 · —
tankcars, tanktrucks, 2,000 gals. lb. .26 · —
tanktrucks 1,000-1,999 gals, same basis lb 26½- —
Dieldrin, dms., c.l. divd. lb 1.85 · —
dms., l.c.l divd. lb 1.90 · —
Diethanolamine dms., c.l., divd E. lb. .27 · —
dms., l.c.l., same basis lb. .28½- —
tanks, same basis lb. .24½- —

Diethanolamine lauryl sulfate, dms., c.l., frt alld lb. .27½- —
dms., t.t.l. frt. alld. lb. .28½- —
tanks, frt alld lb. .26½- —
Diethyl barbituric acid (see Barbital).
Diethyl carbonate dms. c.l., t.o.b. works lb. .47½- —
dms., l.c.l., same basis lb. .48½- —
tanks, same basis lb. .45 · —
Diethyl ethanolamines, dms., c.l., divd lb. .69½- —
dms., l.c.l., divd. lb. .71 · —
tanks, divd lb. .67 · —
Diethyl oxalate dms., c.l., t.o.b. works lb. .42½- —
dms., l.c.l., same basis lb. .43½- —
tanks, same basis lb. .40 · —
Diethyl phthalate dms., c.l., divd. lb. .29¾- —
dms., l.c.l., divd. lb. .31¼- —
tanktrucks, 1,000-1,999 gals, same basis lb. .27¾- —
tankcars, tanktrucks, 2,000-lb lots, same basis lb. .27¼- —
Diethyl sulfate, dms, c.l., frt. alld. E. lb. .21 · —
dms., l.c.l., frt. alld. E. lb. .22½- —
tanks, frt. alld. E lb. .18½- —
Diethyl thiourea, dms., c.l., t.l., works lb. .58 · —
dms., l.c.l., same basis lb. .59 · —
Diethyl toluamide, 90-95% meta isomer dms. c.l., t.l., works. lb 2.30 · —
5-44 dm. lots, works lb 2.35 · —
1-4 dm lots, works lb 2.40 · —

N,N-Diethyl-m-toluidine, tech., tks., tanks, frt. alld lb. .32 · —
Diethylamine, dms., c.l., divd E lb. .32 · —
dms., l.c.l., same basis lb. .33½- —
tanks, same basis lb. .49½- —
N,N-Diethylaniline dms., c.l., frt. alld lb. .37 · —
dms., l.c.l., same basis lb. .38 · —
tanks, same basis lb. .35 · —
Diethylbenzene, 380 lb. dms., c.l., t.l., frt alld., Zone 1 lb. .17½- —
f.o.b., Zone 2 lb. .18½- —
dms., l.c.l., c.l., f.o.b., Zone 1 lb. .19½- —
f.o.b. warehouse points, Zone 2 lb. .20½- —
Diethylbenzene tankcars, Zone 1 lb. .15 · —
Zone 2 lb. .16 · —
Zone 1 is East of the Rockies. Zone 2, West of the Rockies
Di-2-ethylhexyl adipate (see Di-iso-octyl adipate).
Di-2-ethylhexyl phthalate (see Di-iso-octyl phthalate).
Diethylene glycol dms. c.l., divd E. lb. .17¾- —
dms., l.c.l., same basis lb. .19¼- —
tanks, same basis lb. .15¼- —
Diethylene glycol diethyl ether, dms., c.l., works lb. .55 · —
dms., l.c.l., works lb. .55¾- —
Diethylene glycol monobutyl ether, c.l., dms., frt. alld. E lb. .30¾- —
dms., l.c.l., frt. alld. E. lb. .32¼- —
tanks, frt. alld. E lb. .28¼- —
Diethylene glycol monobutyl ether acetate, dms., c.l., works lb. .30¾- —
dms., l.c.l., works lb. .31½- —
tanks, works lb. .28¾- —
Diethylene glycol monoethyl ether, dms., c.l., divd. E lb. .22½- —
dms., l.c.l., divd. E lb. .24 · —
tanks, divd. E lb. .20 · —

Diethylene glycol monoethyl ether acetate, dms., c.l., works. lb. .27¼- —
dms., l.c.l., works lb. .28 · —
tanks, works lb. .25¼- —
Diethylene glycol monomethyl ether, dms., c.l., divd. E lb. .21 · —
dms., l.c.l., divd. E lb. .22½- —
tanks, divd. E lb. .18½- —
Diethylenetriamine, dms., c.l., divd. E lb. .44 · —
dms., l.c.l., divd. E. lb. .45½- —
tanks, divd. E lb. .41½- —
Diethylstilbesterol, USP, bots. 10-kilo lots kilo 100.00 · 147.50
bots. 1-kilo lot kilo 110.00 · 152.50
Digitalis leaves USP, dom., dms lb 1.25 · —
Digitoxin, USP, bots gram. 3.75 · 4.20
Diglycol laurate, dms., ton lots lb. .32½- —
Diglycol stearate, dms., t.l. lb. .36 · —
Diglycolic acid, ngs., c.l., t.l., works. lb. .15½- —
bgs., l.c.l., works lb. .16 · —
Dihexyl sebacate, dms., c.l., works. lb. .66 · —
dms., l.c.l., works lb. .67 · —
tanks, works lb. .64 · —
Dihydrazine sulfate, dms., works lb. 1.10 · 1.25
Dihydrostreptomycin sulfate, bulk. gram. .03 · —
1,2-Dihydroxy anthraquinone, dms., works lb. 3.45 · —
2,2-Dihydroxy-5-5-dichloro-diphenyl methane, purs, dms lb. 2.55 · —
Tech., dms., 20,000 lbs or more lb 1.11 · —
dms. 1,050 lbs to 20,000 lbs. lb 1.13 · —
dms., 150 lbs to 1,050 lbs lb 1.15 · —
Di-isobutyl ketone, dms., c.l., divd. lb. .17 · —
dms., l.c.l., divd. lb. .18½- —
tanks, divd lb. .14½- —
Di-isobutyl phthalate, dms., c.l., divd E. lb. .31½- —
dms. l.c.l., same basis lb. .32½- —
tanks, same basis lb. .29 · —
Di-isobutylene dms. c.l., divd. E lb. .10 · —
dms., l.c.l., divd. E lb. .11½- —
tanks, divd E. lb. .08 · —
Di-iso-octyl phthalate, dms., c.l., works lb. .29 · —
dms., l.c.l., same basis lb. .30½- —
tanktrucks, 1,000-1,999 gals., works lb. .27 · —
tankcars, tanktrucks, 2,000 gals., works lb. .26½- —
Di-iso-octyl sebacate, dms., c.l., works lb. .62 · —
dms., l.c.l., works lb. .61¼- —
tanks, works lb. .60 · —
Di-isopropanolamine, dms., c.l., divd. lb. .23¼- —
dms., l.c.l., same basis lb. .24¾- —
tanks, same basis lb. .20¾- —
Di-isopropylamine dms., c.l., divd. E. of Rockies lb. .50½- —
dms., l.c.l., same basis lb. .52 · —
tanks, same basis lb. .48 · —
Dillweed oil, dom., bots., dms lb. 5.25 · —
Dimethyl anthranilate, cns. lb 4.15 · —
Dimethyl dichlorovinyl phosphate, 55-gal. dms., divd lb 3.50 · —
Dimethyl ethanolamine, anhyd., dms., c.l., divd. E lb. .78 · —
dms., l.c.l., divd. E. lb. .79½- —
tanks, divd. E lb. .75½- —
70% dms., c.l., divd., 100% basis contained amines lb. .78 · —
dms., l.c.l., divd., 100% basis lb. .79½- —
tanks, divd., 100% basis lb. .75½- —
Dimethyl hydroquinone, dms. lb 1.90 2.20
Dimethyl phthalate, dms., c.l., works lb. .29¾- —
dms., l.c.l., works lb. .31¼- —
tanktrucks, 1,000-1,999 gals., same basis lb. .27¾- —
tankcars, tanktrucks, 2,000 gals., same basis lb. .27¼- —
Dimethyl sebacate, dms., c.l., works. lb. 1.31 · —
dms., l.c.l., works lb. 1.30 · —
tanks, works lb. 1.28 · —
Dimethyl sulfate, ret. dms., c.l., works lb. .17½- —
ret. dms., l.c.l., works lb. .18½- —
tanks, works lb. .16½- —
Dimethyl sulfide, dms., c.l., works. lb. .17½- —
dms., l.c.l., works lb. .18½- .19¼
tanks, works lb. .15 · —
Dimethyl sulfoxide, dms., c.l., f.o.b. works lb. .35 · —
dms., l.c.l., same basis lb. .37 · .38
tanks, same basis lb. .33 · —
Dimethylamine, 25% soln., dms., c.l., frt. equald, 100% basis lb. .38 · —
dms., l.c.l., frt. equald, 100% basis lb. .38½- —
tanks, frt. equald, 100% basis. lb. .28 · —
40% soln., dms., c.l., frt. equald, 100% basis lb. .35 · —
dms., l.c.l., frt. equald, 100% basis lb. .35½- —
lb. .28 · —
N,N-Dimethylaniline, dms., c.l., frt. alld lb. .28 · —
dms., l.c.l., same basis lb. .29 · —
tanks, same basis lb. .26 · —
N,N-Dimethylformamide, dms., c.l., t.l., works lb. .32½- —
dms., l.c.l., works lb. .33 · .34
tanks, works lb. .30 · —
2,4-Dinitroaniline, dms., frt. alld lb. .75 · —
Dinitroaniline orange toner, CP, bbls., divd. E. of Rockies. lb. 1.61 · —
Dinitroaniline orange toner prices 1c higher W of Rockies.
m-Dinitrobenzene, 89°C., dms. lb. .26 · —
2,4-Dinitrochlorobenzene, crystallizing at 46½°C., dms., c.l., frt. alld E lb. .17¼- —
dms., l.c.l., frt. alld. E. lb. .17¾- —
tanks, frt. alld. E. lb. .17 · —
2,4-Dinitrophenol, bbls. lb. .41 · —
2,4-Dinitrotoluene, oil, dms. lb. .11 · —
Refd., 63°C. dms. lb. .23 · —
Dioctyl adipate, dms., c.l., works lb. .42½- —
dms., l.c.l., works lb. .43½- —
tanks, works lb. .40 · —
Dioctyl phthalate, dms., c.l., frt. alld. E lb. .29 · —
dms., l.c.l., frt. alld. E lb. .30½- —
tanktrucks, 1,000-1,999 gals., same basis lb. .27 · —
tankcars, tanktrucks, 2,000 gals., same basis lb. .26½- —
Dioctyl phthalate prices ¾c. higher in West.
Dioctyl sebacate, dms., c.l., works. lb. .61¼- —
dms., l.c.l., works lb. .62¼- —
dms., l.c.l., works lb. .62¼ —
tanks, works, divd. lb. .59¼- —
1,4-Dioxane, dms., c.l., frt. alld. E. lb. .31½- —
dms., l.c.l., frt. alld. E lb. .33 · —
tanks, frt. alld. E lb. .29 · —
Prices in the west are 2c. per lb. higher.
Dipentaerythritol, bgs., c.l., t.l., divd. E lb. .34 · —
bgs., l.c.l., t.t.l., divd. E lb. .35 · —
Dipentene, dest.-dist., dms., c.l., works gal. .58 · —
dms., l.c.l., works lb .62 · —
dms., l.c.l., ex whse. gal. .78 · —
tankcars, works gal. .41 · —
Steam dist., dms., c.l., works. South gal .72 · —
dms., l.c.l., divd., New York gal .91 · —
tanks, works, South lb. .55 · —

MONTROSE

CHEMICAL COMPANY

100 LISTER AVENUE
NEWARK, NEW JERSEY

Dimethyl Isophthalate

T.C.P.— Tricresyl Phosphate

Cresyl Diphenyl Phosphate

D.D.T.— Dichloro Diphenyl Trichloroethane

Ethyl Silicate 28% — 40%

Triphenyl Phosphate

Send for literature and samples

EXCLUSIVE SALES AGENT

R. W. Greeff & Co., Inc.

10 ROCKEFELLER PLAZA, NEW YORK 20, N. Y. • Circle 6-9680
1721 TRIBUNE TOWER, CHICAGO 11, ILLINOIS • WHitehall 4-6960

Dip oil (see Tar acid oil).
Diphenolic acid, 1,000-lb. or more, bgs., works lb. .75 - —
Diphenolic polyether acids, 1,000-lb. or more, bgs., works lb. 1.00 - —
Diphenyl, bgs., c.l., t.l., works lb. .16¾- —
bgs., l.c.l., works lb. .18½- —
tanks, works lb. .15¾- —
Diphenyl oxide, perfume grade, cns. lb. .55 - .70
Diphenyl phthalate, dms., c.l., works, lb. .52 - —
dms., l.c.l., works lb. .54 - —
Diphenylamine, refd., flake, bgs., c.l., works, frt. equald lb. .32 —
bgs., l.c.l., same basis lb. .34 —
Refd., fused, tanks, same basis lb. .29 - —
Refd., diphenylamine in dms., ½c. per lb higher
Diphenylguanadine, bgs., dms., ton lots, frt. alld. lb. .51 - —
bgs., smaller lots, frt. alld lb. .52 - —
Diphenylhydantoin-sodium, USP, dms lb. 5.00 5.60
Dipropylene glycol, dms., c.l., frt. alld lb. .17 —
dms., l.c.l., frt. alld. lb. .18½- —
tanks, frt. alld lb. 14¼- —
Dipropylene glycol prices 1c. higher in West.
Dipropylene glycol methyl ether, dms, c.l., dlvd. E lb. .20 —
dms, l.c.l. same basis lb. .21½- —
tanks, same basis lb. 18½- —
Dithiodibenzoic acid, dms, 1,000-lb lots, works lb. 1.80 - —
Di-o-tolylguanidine, dms, ton lots, frt. alld lb. .71 - —
dms., smaller lots, frt. alld lb. .72 - —
Di-o-tolylthiourea, tech, solid, dms., c.l. t.l., frt alld lb. .55 - —
Divinylbenzene, 20-25% dms., c.l., works, frt equald lb. .20 - —
dms., l.c.l. same basis lb. .21 - —
tanks, same basis lb. .19 - —
50-60% dms, c.l., works, 100% basis lb. 1.00 - —
dms, l.c.l., works, 100% basis, lb. 1.05 - —
tanks, same basis lb. .90 - —
Dodecenyl succinic anhydride, dms., c.l., t.l., dlvd, E lb. .75 - —
dms, l.c.l., t.l.l., same basis lb. .76 - —
Dodecylbenzene, dms., c.l., t.o.b., works, frt equald lb. .134 - —
dms, l.c.l. same basis lb .144 —
tanks, same basis lb. .11½- —
Dodecylphenol, c.l., frt. alld. lb. .22½- —
dms., l.c.l., same basis lb. .23½- —
tanks, same basis lb. .20 - —
Dodecylphenol prices on shipments to Western States are 2c per pound higher

Dyes, coaltar certified colors for food, drugs and cosmetics, 500-lb. and 1-lb lots, dlvd.:

Blue, FD&C, No 1	lb.	15.65	17.60
No 2	lb.	15.65	17.60
Green, FD&C, No. 1	lb.	15.65	17.60
No 2	lb.	19.60	22.85
No 3	lb.	31.30	35.90
Red, FD&C, No. 2	lb.	3.30	4.10
No 3	lb.	19.60	22.85
No 4	lb	5.55	7.50

Dyes, coaltar, certified colors for drugs and cosmetics 500-lb and 1-lb. lots dlvd:

Violet, FD&C, No. 1	lb.	15.65	17.60
Yellow, FD&C, No. 1	lb.	9.15	11.05
No 5	lb	3.30	4.10
No 6	lb	3.30	4.10

Dyes, coaltar, certified colors for drugs and cosmetics, 200-lb. and 1-lb. lots, dlvd.:

Black, D&C, No 1	lb.	10.50	10.95
Brown, D&C, No. 1	lb.	15.65	16.10
Green, D&C, No. 5	lb.	15.65	16.10
No 6	lb.	15.65	16.10
No 7	lb.	14.35	14.80
Orange, D&C, No. 3	lb.	10.50	10.95
No 4	lb.	19.60	20.05
No 5	lb	3.80	4.25
Red, D&C, No. 17	lb.	10.50	10.95
No. 18	lb	23.60	24.00
No. 19	lb.	15.00	15.45
No. 21	lb	3.90	4.35
No. 22	lb.	10.50	10.95
No. 28	lb.	24.15	24.65
No 33	lb.	17.00	17.45
Violet, D&C, No. 2	lb.	15.65	16.10
Yellow, D&C, No. 7	lb.	10.50	10.95
No 8	lb.	10.50	10.95
No. 10	lb.	13.05	13.50
No 11	lb.	13.05	13.50

Dyes, coaltar, certified colors for drugs and cosmetics, external use, 500-lb and 1-lb. lots, dlvd.:

Blue, Ext., D&C, No. 1	lb.	15.65	16.10
Green, Ext., D&C, No. 1	lb.	15.65	16.10
Red, Ext., D&C, No. 1	lb.	13.05	13.50
Yellow, Ext. D&C, No. 1	lb	10.50	10.95

Dyes, coaltar for general use in cloth dyeing (numbers are those of the Color Index scale or prototype), contract dlvd. No.

11110	Brilliant scarlet BN	lb.	1.79	- —
13390	Fast blue SR	lb.	1.57	- —
14025	Yellow 2G	lb.	1.26	- —
14030	Orange R, extra, conc.	lb.	1.64	- —
14645	Chrome black T	lb.	.77	- —
14720	Rubine XX, conc	lb.	1.76	- —
15510	Orange Y, extra conc.	lb.	.83	- —
15575	Orange RR	lb.	.99	- —
15620	Fast Red A, conc	lb.	1.61	- —
15705	Chrome blue black R, conc.	lb.	1.12	- —
16150	Scarlet 2RL	lb.	1.22	- —
16255	Brilliant scarlet 3RN, conc.	lb.	1.26	- —
16230	Fast light, orange 2G	lb.	1.39	- —
17590	Brown PG	lb.	3.00	- —
18050	Phloxine 2G	lb.	1.16	- —
18055	Fuchsine 6B	lb.	1.55	- —
18965	Fast yellow 2G	lb.	2.32	- —
19140	Yellow XX	lb.	2.48	- —
19555	Yellow NN, conc.	lb.	3.67	- —
20170	Brown Y	lb	1.33	- —
20470	Blue black, extra, conc	lb.	[illegible]	- —
21010	Brown, RX, conc	lb.	1.42	- —
22240	Scarlet B	lb.	2.81	- —
22310	Red FC	lb.	1.57	- —
22311	Brown MCW	lb.	1.59	- —
22310	Blue 2B, extra conc	lb.	1.51	- —
23500	Red 4BX, conc.	lb.	1.80	- —
24410	Sky blue FF, extra, conc.	lb.	1.95	- —
24895	Brilliant yellow, conc	lb.	3.27	- —
26360	Navy blue 3R, conc.	lb.	1.84	- —
26695	Black F, conc.	lb.	2.30	- —
26900	Milling Red 3R, conc	lb	2.24	- —
27075	Neutral black 2B, conc	lb.	2.75	- —
27720	Gray L	lb	2.18	- —
29185	Fast scarlet 4BNC	lb	2.23	- —
30015	Diazo black VJ conc.	lb.	2.48	- —
30045	Yellow brown K, extra	lb.	1.45	- —
30235	Black EB, 300%	lb.	1.33	- —
30295	Green BY conc.	lb.	1.07	- —
35660	Brown B	lb.	2.89	- —
37565	Naphthol SWF	lb.	1.85	- —
40000	Yellow 2G	lb.	1.44	- —
41000	Yellow OX	lb.	2.45	- —
42000	Green V, crystals	lb.	2.73	- —
42040	Brilliant green G crystals	lb.	3.62	- —
42090	Blue EG	lb.	1.85	- —
42100	Milling green 6B, conc.	lb.	4.78	- —
42640	Violet 4BXN	lb	2.43	- —
43830	Brilliant blue, BBG	lb	2.44	- —
44045	Blue B, extra conc.	lb.	3.61	- —
45170	Red BX	lb.	4.76	- —
50415	Nigrosine SSJ	lb.	1.03	- —
52015	Blue GXX	lb.	2.54	- —
58005	Alizarin red SC	lb.	3.64	- —
59700	Golden orange GFD, single paste	lb	2.70	- —
59710	Flaming orange 6RD double powder	lb.	4.96	- —
59800	Dark blue BO, single paste	lb.	2.28	- —
59825	Jade green NC supra, double paste	lb.	1.75	- —
61570	Alizarin green CG, extra	lb.	3.81	- —
63010	Alizarin blue SAPG	lb.	3.90	- —
63615	Alizarin blue black B	lb	3.26	- —
69825	Blue BLFD double paste	lb.	2.76	- —
70800	Brown BR single paste	lb.	2.03	- —

Dyes, coaltar oil-soluble, 100-lb. drums, dlvd. No.

12140	Oil scarlet BL	lb	1.87	- —
12055	Oil orange 7078 V	lb	1.38	- —
26120	Oil red N 1700	lb	1.94	- —
42535B	Methyl violet base	lb	1.88	- —
44045B	Victoria blue base	lb	4.06	- —
50415B	Oil black 8603	lb	.80	- —
61565	Alizarin cyanine green base.	lb.	6.13	- —

Dyes, coaltar, spirit soluble, 100 lb. dms., dlvd., Black RB lb. 3.89 - —
Spirit brown GN lb. 5.30 - —
Spirit orange R conc. lb. 5.87 - —
Spirit red B conc. lb. 6.41 - —
Pr. 517 Spirit yellow 2R conc lb. 4.62 - —
Pr. 554 Spirit blue THN lb. 5.06 - —

E

Echinacea root, bls. lb 1.23 - —
Elm bark, grinding, bls. lb. .30 - .32
Powd., bbls., ½s lb. .60 - —
Select, bundles lb. .75 - —
Emetine hydrochloride, USP, bots. oz. 48.40 - —
Endrin, tech, dms., 100-lbs or more, 100% basis, dlvd lb. 2.77 - —
Eosin red toner, bbls, works lb. 1.95 - —

Ephedrine, syn., USP, anhyd., bots. 100-oz. lots oz. .98 - 1.00
hydrous, bots., 100-oz. lots, oz. .93 - —
Ephedrine hydrochloride, NF, dms., 100-oz., f.o.b. works oz. .75 - —
Ephedrine sulfate, USP, cryst., dms., 100-oz. f.o.b works oz. .73 - —
USP, powd., dms., 100-oz., same basis oz. .73 - —
Epichlorohydrin, dms., c.l., dlvd lb. .29½- —
dms., l.c.l., dlvd. lb. .31 - —
tanks, dlvd. lb. .27 - —
l-Epinephrine base, syn. USP, bots., 100 gram lots gram. .58 - —
Epsom salt (see Magnesium sulfate).
Erigeron oil, cns. lb. 11.00 - —
Ergot, NF, dms., tin-lined lb. 2.00 - 2.50
Eserine salicylate, bots oz. 34.50 -40.00
Eserine sulfate, bots oz. 86.00 - —
Ester gum, gum-rosin type, dms., c.l. dlvd., Ill., Md. Ky., E. States, Minneapolis, N. C., Ohio, St. Louis, St Paul, Va., W Va lb. .18½- —
Wood-rosin type, dms, c.l., same basis lb. .18½- —
Ether (see specific product)
Ethyl acetate, nat., ferment, 85-88%, dms, c.l. dlvd lb. .15 - —
dms., t.c.l., dlvd lb. .16½- —
tanks, dlvd lb. .12½- —
85-98% dms, c.l., dlvd. lb. .15¼- —
dms., t.c.l., dlvd. lb. .16¾- —
tanks, dlvd. lb. .12¾- —

Ethyl acetate, nat., ferment, 90%, dms., c.l. dlvd lb. 15½- —
dms., t.c.l., dlvd. lb 17 —
tanks, dlvd lb 13 —
syn., 85-88% dms., c.l., dlvd lb 15 —
dms., t.c.l., dlvd. lb 16½ —
tanks, dlvd lb. 12½ —
Ethyl acetate, syn. 95-98%, dms., c.l., dlvd lb 15¼ —
dms., t.c.l., dlvd lb 16¾ —
tanks, dlvd lb 12¾ —
99%, dms, c.l. dlvd. lb 15½ —
dms., t.c.l., dlvd. lb 17 —
tanks, dlvd lb. 13 —
Ethyl acetoacetate, dms., c.l., dlvd. lb 56½- —
dms., t.c.l., dlvd. lb. .60 —
tanks, dlvd lb. .56 —
Ethyl acrylate, dms., c.l., t.l., dlvd. lb. .34¾- —
dms., l.t.l., dlvd lb. .35¾- —
tanks, dlvd. lb. .32¼- —
Ethyl alcohol, 190 pf., USP, tax paid, dms, c.l., dlvd, E of Rockies gal. 20.63 —
dms., t.c.l. same basis gal. 20.73 -20.84
Ethyl alcohol, 190 pf., USP, tax-free, dms, c.l. dlvd E of Rockies gal. 68 —
dms., t.c.l., same basis gal. 78 .89
tanks, same basis gal .52 —
Ethyl alcohol, absolute 200 pf., tax paid, dms, dlvd E of Rockies gal. 21.75 —
dms., t.c.l., same basis gal. 21.85 -21.98
tanks, same basis gal. 21.59 —

HARDWORKING JEFFERSON CHEMICALS

ETHYLENE OXIDE and PROPYLENE OXIDE

ETHYLENE OXIDE

SPECIFICATIONS

Water, wt.%	0.03 max.
Aldehyde as acetaldehyde, wt.%	0.010 max.
Acidity as acetic, wt.%	0.002 max.
Non-volatile residue, gms./100 ml	0.010 max.
Residual odor	None
Color	Water-white
Inorganic chloride as Cl	Nil
Acetylene	Nil

SELECT PROPERTIES

Boiling point, 760 mm	10.73°C.
Explosive limits in air by volume	3-100%
Flash point (open cup)	<0°F.
Specific gravity, 20/20°C	0.8711
Specific heat (liquid)	0.44 cal./gm./°C.
Weight, 20°C	7.25 lbs./gal.

PROPYLENE OXIDE

SPECIFICATIONS

Specific gravity, 20/20°C	0.829 min. 0.831 max.
Acidity as acetic, wt.%	0.005 max.
Water, wt.%	0.10 max.
Color, Pt-Co scale	10 max.
Residual odor	None
Aldehyde as propionaldehyde, wt.%	0.05 max.
Boiling range, ASTM, °C	33.0-37.0

SELECT PROPERTIES

Boiling point, 760 mm	34.1°C.
Explosive limits in air by volume	2.1-38.5%
Flash point (open cup)	—35°F.
Specific gravity, 20/20°C	0.8305
Specific heat (liquid)	0.51 cal./gm./°C.
Weight, 20°C	6.92 lbs./gal.

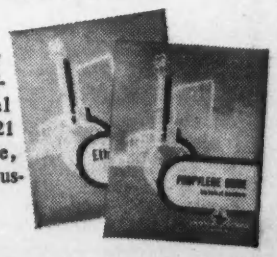
SHIPPING AND HANDLING

Ethylene oxide and propylene oxide are available from Jefferson in 10,000-, 6,000-, and 4,000-gal. tank cars (I.C.C. Spec. 105-A-100-W) and E. O. in 400-lb. net drums (I.C.C. Spec. 5P), P. O. in 370-lb. net drums (I.C.C. Spec. 17C) . . . red labels required.

Both ethylene oxide and propylene oxide represent a potential hazard in handling and storage. All equipment including piping, storage tanks and relief valves used in the handling of these oxides should be of carbon steel or stainless steel and with a minimum working pressure of 50 psig. Complete methods of handling and precautionary measures are available from our technical service people . . . let them assist you in any phase of your oxide program.

TECHNICAL INFORMATION

For detailed specifications, applications, storage, handling and bibliography on ethylene oxide and propylene oxide, request the respective Technical Brochures. Also, comprehensive literature surveys on these two oxides are yours for the asking . . . Jefferson Chemical Company, Inc., 1121 Walker Avenue, P. O. Box 303, Houston 1, Texas.



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CHARLOTTE • LOS ANGELES • SAN FRANCISCO

JEFFERSON CHEMICALS

Ethyl alcohol, denatured (see Denatured alcohol, ethyl)
Ethyl aminobenzoate USP (see Benzocaine).
Ethyl amyl ketone, dms., c.l., dlvd. E ... lb .20 —
dms., l.c.l., same basis ... lb .21½ —
tanks, same basis ... lb .17½ —
Ethyl benzoate, bcts. ... lb .75 1.00
Ethyl bromide, tech., 98%, dms., c.l., frt. alld. E ... lb .43 —
dms., l.c.l., frt. alld. E ... lb .45 - —
tanks, frt. alld. E ... lb. .40 - —
2-Ethyl butyl alcohol, dms., c.l., works ... lb .30 —
dms., l.c.l., works ... lb .30¾- —
tanks, works ... lb .28 - —
Ethyl butyl ketone, dms., c.l., t.l., works ... lb .36 - —
dms., l.c.l., t.l., works ... lb .36¾- —
tanks, works ... lb .34 - —
Ethyl butyrate, dms., works ... lb .85 1.00
Ethyl carbamate (see Urethane)
Ethyl cellulose, vis., 10, 20, 50, 100, 150 cps., bgs., 5,000-lb. lots or more, frt. alld. E ... lb. .68 - —
bgs., smaller lots, frt. alld. E ... lb .70 —
Ethyl chloride, tech., cyls., works ... lb .20 .22
dms., works ... lb .18 .20
tanks, works ... lb .10 —
Ethyl cinnamate, cns. ... lb. 3.15 3.35
Ethyl ethanolamines, mixed, dms., c.l., dlvd. E ... lb. .43½- —
dms., l.c.l., dlvd. E ... lb. .44½ —
tanks, dlvd. E ... lb .41½- —
Ethyl ether, absolute, ACS, dms ... lb. .27 —
Anesthesia, USP, dealers, 1-lb. cns ... lb. 1.01 —
½-lb. cns ... lb 1.09 —
¼-lb. cns. ... lb 1.21 —
Indust., dms., c.l., dlvd. ... lb .13½- —
dms., l.c.l., dlvd. E ... lb. .15 —
tanks, dlvd. E ... lb .11 —
2-Ethyl hexoic acid, dms., c.l., t.l., dlvd. E ... lb .37 —
dms., l.c.l., t.l., dlvd. E ... lb. .38½- —
tanks, dlvd. E ... lb. .34½ —
2 Ethyl hexoic acid, le higher, W. of Rockies.
2-Ethylhexyl acrylate, dms., c.l., t.l., straight or mixed, frt. alld. E ... lb. .39½- —
dms., l.t.l., same basis ... lb. .40½- —
tanks, same basis ... lb. .37 - —
2-Ethylhexyl alcohol, dms., c.l., dlvd. E ... lb. .23¾- —
dms., l.c.l., dlvd. E ... lb. .25¼- —
tanks, dlvd. E ... lb. .21¼- —
Ethyl iodide, cbys., works ... lb 3.30 —
Ethyl methacrylate, dms., c.l., frt equald ... lb .52 —
dms., l.t.l., frt equald ... lb 52½- —
tanks, frt. equald ... lb 50 —
Ethyl morphine hydrochloride, USP, bots ... oz. 11.85 —
Ethyl oenanthate, dms ... lb 1.05 1.30
Ethyl oxalate (see Diethyl oxalate)
Ethyl silicate, dist. (see Tetraethyl orthosilicate)
Ethyl silicate, 40% available SiO2, dms., c.l., dlvd. E ... lb. .44 - —
dms., l.c.l., dlvd. E ... lb. .45½- —
tanks, dlvd. E ... lb. .42 - —
N-Ethyl-a-naphthylamine, dms., works, lb. 1.04 - —
N-Ethyl-m-toluidine, tech., liq., tanks, frt alld ... lb .83 - —
N-Ethyl-o-toluidine, bbls ... lb. .88 - —
Ethylamine (see Mono-, Di-, or Tri-)
N-Ethylaniline, dms., c.l., frt. alld. ... lb .57 - —
dms., l.c.l., frt alld ... lb .58 - —
tanks, frt. alld ... lb. .55 - —
Ethylbenzene, 99% dms., c.l., t.l., frt. equald ... lb. .14 - —
dms., l.c.l., same basis ... lb. .16 - —
tanks, same basis ... lb. .11½- —
Ethylene, contract refy gate ... lb .0475- .0520
Ethylene dibromide, dms., c.l., frt. equald ... lb .30½ —
dms., l.c.l., frt equald ... lb .31½ —
tanks, frt equald ... lb .28½ —
Ethylene dichloride, dms., c.l., dlvd. ... lb .11½- —
dms., l.c.l., same basis ... lb .13 - —
tanks, same basis ... lb .09 - —
Ethylene dichloride, prices W. of Rockies, 1c. per lb. higher
Ethylene glycol, indust., dms., c.l., dlvd. E ... lb. .16 —
dms., l.c.l., same basis ... lb. .17½- —
tanks, same basis ... lb. .13½- —
Ethylene glycol monobutyl ether, dms., c.l., dlvd. E ... lb. .22 —
dms., l.c.l., dlvd. E ... lb. .23½- —
tanks, dlvd. E ... lb. .19½- —
Ethylene glycol monoethyl ether, dms., c.l., dlvd. E ... lb. .21 —
dms., l.c.l., dlvd. E ... lb. .22½- —
tanks, dlvd. E ... lb. .18½- —
Ethylene glycol monoethyl ether acetate, dms., c.l., dlvd. E ... lb. .19½- —
dms., l.c.l., dlvd. E ... lb. .21 - —
tanks, dlvd. E ... lb. .17 - —
Ethylene glycol monomethyl etner, dms., c.l., dlvd. E ... lb. .21 - —
dms., l.c.l., dlvd. E ... lb. .22½ - —
tanks, dlvd. E ... lb. .18½- —
Ethylene glycol monomethyl ether acetate, dms., c.l., works ... lb. .29 - —
... lb. .29 - —
dms., l.c.l., works ... lb. .29¾- —
tanks, works ... lb. .27 - —
Ethylene glycol monostearate, flake, 150-lb. ctn ... lb. .33 - —
Ethylene oxide, dms., c.l., dlvd. E ... lb. .21½ —
dms., l.c.l., dlvd. E ... lb. .24½ —
tanks, dlvd. E ... lb. .15½- —
Ethylene trichloride (see Trichloroethylene)
Ethylenediamine, 85-88%, dms., c.l., dlvd. E., 100% basis ... lb. .42 - —
dms., l.c.l., dlvd. E., 100% basis, ... lb .43 - —
tanks, dlvd. E., 100% basis ... lb .40 - —
Ethylvanillin, 100-lb. fib. dms., 500-lb. ... lb. 6.75 - —
less than 500-lb. ... lb. 7.40 - —
Eucalyptol, USP, cns., dms ... lb .85 1.40
Eucalyptus oil, NF, rectified, 70-75%, dms ... lb .45 —
NF, rectified, 80-85% dms ... lb .53 .63
Eugenol, tech., dms. ... lb. 0.00 - —
USP, dms. ... lb. 1.90 - —
Euphorbia herb, bls ... lb .12 .15

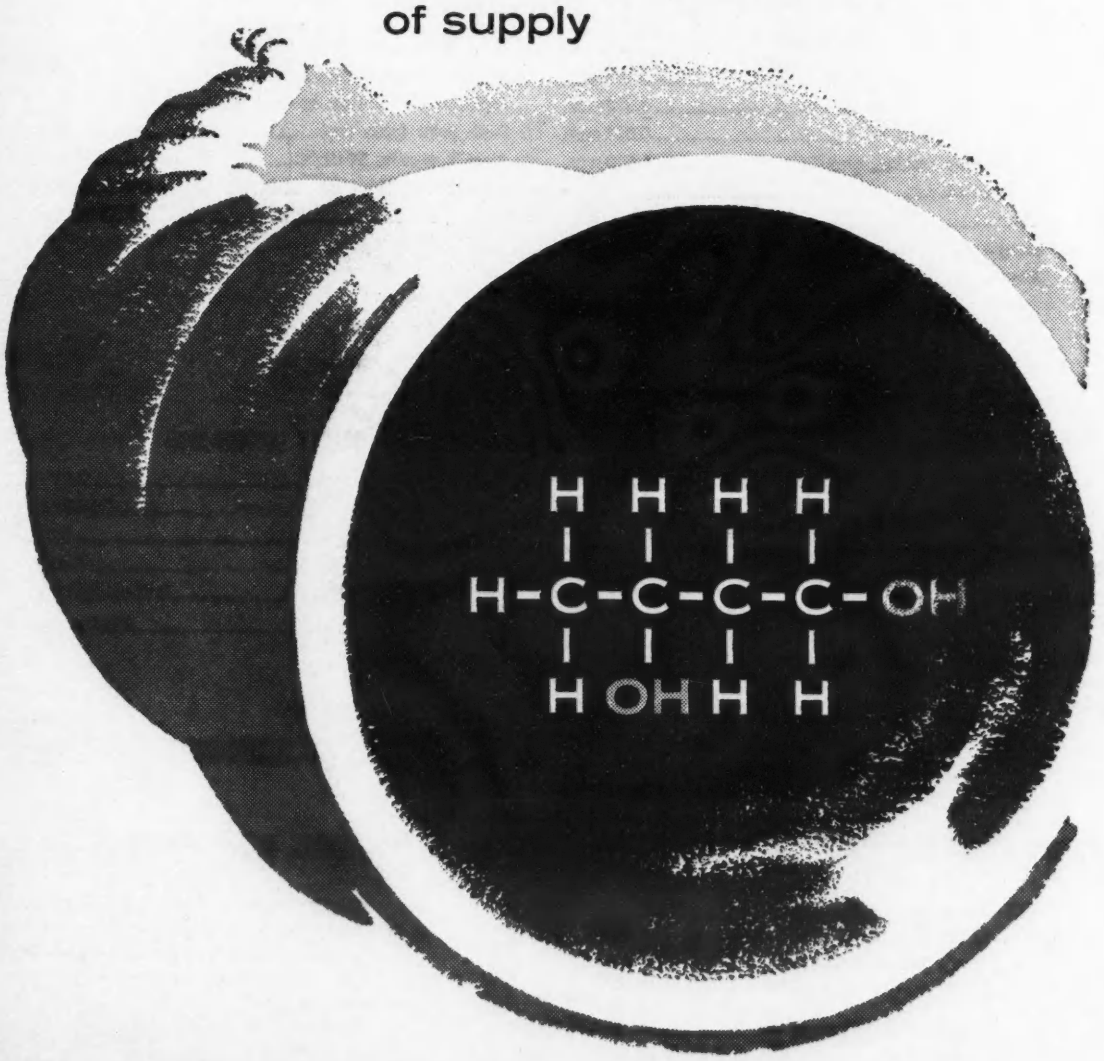
F

F salt paste, tech., dms., works ... lb 2.30 - —
Fennel oil, sweet, USP, cns. ... lb. 2.60 - —
Fennel seed, Argentine, bgs. ... lb .16 —
French, light, bgs ... lb .16 —
Indian, light, bgs ... lb. .17½- —
Rumanian, bgs ... lb .14 —
Yugoslav, light, bgs ... lb. .16½- —
Fenugreek seed, Moroccan, bgs. ... lb. .09 - —
Ferric chloride, anhyd., tech., 350-lb. dms., c.l., works, 100 lbs. 8.00 - —
dms., l.c.l., works, 100 lbs. 9.00 - —
Ferric chloride, indust., cryst., bbls., c.l., works, 100 lbs. 5.25 6.75
bbls., l.c.l., works, 100 lbs. 5.75 7.25
42° Be., photo grade, cbys., c.l., works, 100 lbs. 7.25 8.25
sewage grade, tanks, frt. equald., 100% basis, 100 lbs. 4.00 —
USP, cryst., dms., t.l., works, lb. .08½- —
Ferric citrate, gran., dms. ... lb. .86 - —
Ferric hypophosphite, NF, 175-lb. dm. ... lb. 4.25 - —
Ferric naphthenate, liq., 6% Fe, dms., frt. alld. ... lb. .28¼- —
Ferric oxalate, tech., gran., 50-lb. dm., f.o.b. works, E ... lb. .89 - —
Ferric oxides (see Iron oxides)
Ferric phosphate, NF, soluble, gran. pearls, cs. ... lb. .72 .75
Ferric pyrophosphate, NF VII, soluble, gran. pearls, 225-lb. dm. ... lb. .79 - —
Ferric resinate, dms., ton lots, frt. alld. ... lb. .45 - —
Ferric stearate, dms., c.l., frt. alld. ... lb. .39 - —
dms., l.c.l., frt. alld. ... lb. .40 - .44
Ferric sulfate, partly hydrated, bgs., c.l., works ... ton. 35.25 —
bgs., l.c.l., works ... ton. 36.25 - 42.25
bulk, c.l., works ... ton. 33.25 - —
Ferric-amonium citrate, NF, brown, gran., 100-lb. dms. ... lb. .68 - —
NF, green, gran., 100-lb. dms., frt. equald ... lb. .68 - —
Ferric-ammonium oxalate, fine gran., dms ... lb. .27½- .29½
Ferric-potassium oxalate, fine gran., dms ... lb. .32½- .34½
Ferric-sodium oxalate, fine gran., dms ... lb. .27½- .29½
Ferrous gluconate, USP, 200-lb. dm., frt. equald ... lb. .96 - —
Ferrous sulfate, gran., bgs., c.l., works ... ton. 34.50 - —
bgs., l.c.l., dlvd. Metropolitan area, 100 lbs. 3.35 4.25
bbls., c.l., works ... ton. 40.00 —
bulk, c.l., works ... ton. 27.00 - —
USP, cryst., bbls., dms. ... lb .09½- .10
Fir balsam, Canada, bbls ... gal. 34.00 - 35.00
Oregon, bbls ... gal. 3.40 4.64
Fir oil, Canada, cns ... lb. 1.70 - 1.75
Fish oil, refd., alkali, dms. ... lb. .1300- .1350
Kettle-bodied, dms. ... lb. .1530- .1580
Light-pressed, dms. ... lb. .1150- .1200
tanks ... lb. .10 - —
Fishliver oil, nat., high potency, 100,000 to 1,500,000 A units per gram, dms., 1,000,000 units. .12 - —
Fishmeal, dom., menhaden, 60% protein, grd., bgs., Atlantic and Gulf coasts ... ton. 92.50 - 95.00
Fishscrap, dom., menhaden, dried, 60% protein, grd., bgs., Atlantic and Gulf coasts ... ton. 88.00 - —
Fleaseed (see Psyllium seed)
Folic acid, USP, bots., fib. dms., kilo lots or more, gram .25 - —
10% feed grade, fib. dms., 3 kilos or more ... kilo. 30.00 - 44.00
Formaldehyde, 37% (inhibited, 12 to 15% methanol), USP, dms., c.l., dlvd. ... lb. .0695- —
tanks, dlvd. ... lb. .0405- —
Formaldehyde, methanol-free (uninhibited), tanks, dlvd. ... lb. .0375- —
Formic acid, 85%, cbys., c.l., works ... lb. .1570- —
cbys., l.c.l., works ... lb. .1620- .1720
90%, cbys., c.l., works ... lb. .1625- —
cbys., l.c.l., works ... lb. .1675- .1775
Fringetree bark, bls ... lb. .65 .70
Fumaric acid, tech., 250-lb. dms., c.l., frt. equald ... lb. .23¼- —
dms., l.c.l., frt equald ... lb. .24¾- —
Fumaric acid in bags ½c. per lb. less
Furfural, dms., c.l., works ... lb. .13 —
dms., l.c.l., works ... lb. .14 —
tanks, dlvd. E ... lb. .11½- —
tanks, dlvd. W ... lb. .12½- —
Furfuryl alcohol, cns., works ... lb. .28 —
dms., c.l., t.l., Newark, N. J ... lb. .20½- —
dms., l.c.l., t.l., Newark, N. J ... lb. .21½- —
dms., c.l., t.l., Memphis, Tenn ... lb. .19 —
dms., l.c.l., t.l., Memphis, Tenn. ... lb. .20 —
tanks, Memphis, Tenn ... lb. .175 —
Fusel oil, refd., dms., c.l., dlvd ... lb. .18 —
dms., l.c.l., dlvd. ... lb. .19½- —
tanks, dlvd ... lb. .15½- —

G

G salt, bbls., frt. alld., 100% basis ... lb. 73 —
Gallic acid, NF VII, bbls., 1,000-lb. lots ... lb 2.00 —
bbls., smaller lots ... lb. 2.02 2.22
Tech., bbls., 1,000-lb. lots ... lb. 1.78 —
bbls., smaller lots ... lb 1.80 2.00
Gamma acid, dry grd., bbls., frt. alld ... lb. 1.75 —
Gammapicoline (see g-picoline)
Garlic oil, dom., bots ... oz. 4.75 6.00
Imp., bots ... oz. 4.50 5.00
Gaultheria oil (see Wintergreen oil).

Celanese 25-million lb. production capacity for 1,3-BUTYLENE GLYCOL gives the alkyd paint industry its first volume source of supply



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Celanese CHEMICALS

Celanese Chemical Company is a Division of Celanese Corporation of America.
Canadian Affiliate: Canadian Chemical Company Limited, Montreal, Toronto, Vancouver.
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16.

Gelatin, edible 75 AOAC test, bbls., c.l., dlvd	lb.	.55	—
150 AOAC test, bbls., c.l., dlvd.	lb.	.64	—
200 AOAC test, bbls., c.l., dlvd.	lb.	.70	—
225 AOAC test, bbls., c.l., dlvd.	lb.	.74	—
275 AOAC test, bbls., c.l., dlvd.	lb.	.82	—
Gelsemium root, bls.	lb.	.30	.35
Gentian root bls.	lb	.24	—
Grd., bbls., hxs	lb	.30	—
Powd., bbls hxs	lb	.30	—
Geraniol extra cns, dms.	lb	1.75	2.40
Soap grade dms	lb	.90	1.75
Standard cns, dms.	lb.	1.65	—
Synthetic dms	lb	1.30	—
Geranium oil, Algerian, cns.	lb.	19.00	-22.00
Bourbon, cns.	lb.	20.00	-22.00
Geranium oil Turkish (see Palmarosa oil)			
Geranyl acetate cns	lb	1.90	2.70
Synthetic dms	lb.	1.45	—
Ginger oil dist. bots	lb.	11.50	14.00
Ginger oleoresin NF from African root, bots	lb	4.25	5.00
NF from Jamaican root, bots.	lb.	7.75	—
Ginger root, Cochin, bgs	lb.	.19½	—
Jamaican, No 3, bgs.	lb.	.28	—
Nigerian, split, bgs	lb.	.20	—
Sierra Leone, bgs	lb.	.35	—
Glauber's salt (see Sodium sulfate).			
Gluconic acid tech 50% dms, c.l., t.l., f.o.b. works	lb.	.20	—
dms., l.c.l., f.o.b works	lb.	.21	—
tanks, f.o.b works	lb.	.17	—
Glue, bone, extracted, dry bone, 86 jellygrams, bgs., c.l., dlvd	lb.	.16	—
131 jellygrams, bgs., c.l., same basis	lb.	.16½	—
164 jellygrams, bgs., c.l., same basis	lb.	.18½	—
Glue, bone, extracted, dry bone, 191 jellygrams, bgs., c.l., same basis	lb.	.19½	—
222 jellygrams, bgs., c.l., same basis	lb.	.21	—
Glue, bone, green 40 jellygrams, bgs., c.l., same basis	lb.	.16	—
86 jellygrams, bgs., c.l., same basis	lb.	.16	—
115 jellygrams, bgs., c.l., same basis	lb.	.16½	—
Glue, bone, green 135 jellygrams, bgs., c.l., same basis	lb.	.17½	—
164 jellygrams, bgs., c.l., same basis	lb.	.18½	—
180 jellygrams, bgs., c.l., same basis	lb.	.19½	—
200 jellygrams, bgs., c.l., same basis	lb.	.20½	—
Bone glue, l.c.l. prices 2c. higher.			
Glue, hide, 70-94 jellygrams, bgs., c.l., dlvd	lb.	.18	—
95-149, bgs., c.l., dlvd	lb.	.19	—
122-149, bgs., c.l., dlvd	lb.	.20½	—
150-177 bgs., c.l., dlvd	lb.	.22½	—
178-206 bgs c.l. dlvd	lb.	.25	—
Glue, hide, 207-236, bgs., c.l., dlvd	lb.	.28	—
237-266, bgs. c.l., dlvd	lb.	.30½	—
267-298, bgs., c.l., dlvd	lb.	.32½	—
299-330, bgs., c.l., dlvd	lb.	.34½	—
331-362, bgs., c.l., dlvd	lb.	.36½	—
363-394 bgs., c.l., dlvd	lb.	.38	—
Glue, hide, 395-427, bgs., c.l., dvld.	lb.	.40	—
428-460, bgs., c.l., dlvd	lb.	.42	—
461-494, bgs., c.l., dlvd	lb.	.44	—
495-529 bgs., c.l. dlvd	lb.	.46	—
Hide glue, l.c.l. prices 2c. higher			
l-Glutamic acid, 99½%, fib. dms., 100-lb lots, frt. alld	lb.	1.80	—
fib. dms. 25-lb lots, frt. alld.	lb	1.88	—
l-Glutamine bots., 1-9 kilo lots,	kilo.	150.00	-300.00
Bots., 50-kilo lots	kilo.	100.00	—
Bots. 500-kilo lots	kilo	75.00	—
Glycerine dom. nat. crude, saponification 88%, tanks dlvd,	b.	.1670	.1760
nat., crude, soapiye 80%, tanks, dlvd	lb.	.1520	.16
nat. refd. USP, CP, 99%, dms., c.l., dlvd	lb.	.28⅞	—
dms., l.c.l., dlvd	lb.	.29⅝	—
tanks, dlvd.	lb.	.27⅛	—
Glycerine dom. nat., refd., USP, CP, 96%, dms., c.l., dlvd	lb.	.28	—
dms., l.c.l., dlvd	lb.	.28¾	—
tanks, dlvd.	lb.	.26¼	—
nat. high gravity, dms., c.l., dlvd	lb.	.28¾	—
dms., l.c.l., dlvd	lb.	.29½	—
tanks, dlvd.	lb.	.27	—
Glycerine dom. syn., dms., c.l., dlvd	lb.	.29	—
dms., l.c.l., dlvd	lb.	.29¾	—
tanks, dlvd.	lb.	.27¼	—
Imp. nat., crude, soapiye, 80%, c.l.f.	lb.	.15	—
Glycine (see Aminoacetic acid).			
Glycerol (see Glycerine).			
Glycolic acid (see Hydroxyacetic acid).			
Glycolonitrile 70%, aqueous, dms., c.l., t.l., works	lb.	.40	—
dms., l.c.l., same basis	lb.	.42	—
tanks, same basis	lb.	.39	—
Glyoxal, 30%, dms., c.l., works	lb.	.20½	—
dms., l.c.l., works	lb.	.21¼	—
tanks, works	lb.	.18	—
Golden seal root, NF, tested, bls.	lb.	3.10	—
Gramicidin, 1 to 5 kilos, f.o.b. works.	gram.	4.25	—
Grapefruit oil, dms	o.	2.75	2.90
Graphite, amorp., powd., bgs., fib. dms., ex whse	lb.	.06	.09½
Cryst. 88-90% powd bgs., fib. dms., ex whse	lb.	.19	.21½
90-92%, powd., bgs., fib. dms., ex whse	lb.	.21	.24½
95-97%, powd., bgs., fib. dms., ex whse	lb.	.29	.31½
Flake, No 1, 90-95%, bgs., fib. dms., ex whse	lb.	.29	.31
No 2, 90-95% bgs., fib. dms., ex whse	lb.	.29	.31
Grease, white choice all hog, tanks, dlvd	lb.	.09½	—
Yellow, tanks, dlvd.	lb.	.05⅞	.06
Grease oil, No. 1, dms., c.l., f.o.b. Chicago	lb.	.11	—
dms., l.c.l., same basis	lb.	.13	—
tankcars, same basis	lb.	.09½	—
Extra winter, strained, dms., c.l., Chicago	lb.	.13½	—
dms., l.c.l., same basis	lb.	.15½	—
tankcars, same basis	lb.	.12	—
Prime, burning, dms., c.l., same Chicago	lb.	.15	—
dms., l.c.l., same basis	lb.	.17	—
tankcars, same basis	lb.	.13½	—
Other areas ¾c. higher, except Texas and West Coast, 1¼c. higher.			

GREEN PIGMENTS
Green pigment quotations are listed individually. For example, prices on Green, chrome, may be found in the C's under Chrome green

Grindelia robusta herb bls	lb	.40	—
Guaiacol NF cryst. dms., tins	lb	2.10	2.15
NF liq chys dms	lb	2.30	2.40
Guaiacwood oil cns.	lb.	.65	.80
Guaiacol carbonate, NF VII, dms	lb.	2.40	2.60
Guar gum, edible., bgs., c.l., f.o.b. shipt. pt.	lb.	.38	—
bgs., l.c.l. same basis	lb.	.40	.42
Indust., bgs., c.l., same basis	lb.	.32	—
Tech., bgs., c.l., same basis	lb.	.30	—

GUMS
Gum quotations are listed individually. For example, prices on Gum, Dammar, may be found in the D's under Dammar gum.

H

H acid, dry, bbls. c.l., frt alld., 100% basis	lb.	1.00	—
bbls., l.c.l. same basis	lb.	1.05	—
Hansa yellow 10 G, bbls., dlvd, E. of Rockies	lb	2.45	—
Hansa G yellow, pigment, bbls	lb.	2.20	—
Hawthorn berries, bgs.	lb.	.18	.20
Heliotropin 100-lb lots, dms.	lb.	2.60	3.40
Hellebore root dom. green, bls	lb.	.70	.75
Helonias root bls	lb.	1.50	—
Hemlock oil, cns.	lb.	2.55	3.00
Henbane leaves, bls	lb.	.40	.45
Heptachlor dms. c.l., t.l., frt. alld., 100% basis	lb.	.98	—
Heptane, indust., tankcars, New Jersey and New York	gal.	.20	—
Houston Texas	gal.	.1625	—
Hesperidin, purif., 50 kilos, f.o.b. works	kilo.	19.70	—
Hesperidin methylchalcone, 50 kilos, f.o.b. works	kilo.	49.25	—
Hexachlorophene dms., 1,100 lbs. or more	lb.	1.84	—
dms. to 1,100 lbs	lb.	1.94	—
Hexalin (see Cyclohexanol).			
Hexamethylenetetramine, tech., bgs., 20,000-lb. lots or more, Perth Amboy or New York City	lb.	.233	—
Hexamethylenetetramine, tech., bgs., 1,000-19,999-lb. lots, same basis	lb.	.243	—
bgs., smaller lots, same basis	lb.	.253	—
fib dms., 1,000-lb. lots or more, same basis	lb.	.250	—
fib dms., smaller lots, same basis	lb.	.253	—
Hexamethylenetetramine, USP, bgs., 500 lbs. or more, f.o.b. Fords, N. J., dlvd. New York City and Philadelphia	lb.	.42¼	—
bgs., smaller lots, same basis	lb.	.43½	.48½
Hexane, industrial, tankcars, New Jersey and New York	gal.	.20	—
Houston, Texas	gal.	.16	—
1-Hexanol, dms., c.l., works	lb.	.35	—
dms., l.c.l., works	lb.	.35¼	—
tanks, works	lb.	.33	—
Hexyl cinnamic aldehyde, dms.	lb.	3.95	4.00
n-Hexyl methacrylate, dms., c.l., works	lb.	.75½	—
dms., l.c.l., works	lb.	.76	—
Hexyl salicylate, dms.	lb.	1.70	1.75
Hexylene glycol, dms., c.l., dlvd	lb.	.17½	—
dms., l.c.l., dlvd.	lb.	.19	—
tanks, dlvd.	lb.	.15	—
Hexylresorcinol, USP, dms., 25-lb. lots or more, dlvd	lb.	14.00	—
dms., smaller lots, dlvd.	lb.	14.50	—
Homatropine hydrobromide, USP, bots oz.		3.25	—
Homatropine methylbromide, USP, bots oz.		3.00	3.25
Hoofmeal, 17-18% ammonia bulk, c.l., Chicago unit-ton		6.75	—
Horehound herb, bls	lb.	.18	.20
Hydrastis (see Goldenseal).			
Hydrazine hydrate, 85% ret. dms., works	lb	1.35	1.55
100%, ret. dms., works	lb	1.60	1.90
Hydriodic acid, purif., 47%, 2-cbys., f.o.b works	lb	2.92	—
Hydroabietyl alcohol, tech., solid, dms., c.l., dlvd, zone 1	lb.	29¼	—
dms., l.c.l., dlvd zone 1	lb	29¾	30¼
tanks, dlvd zone 1	lb	27¼	—
Zone 1 for hydroabietyl alcohol comprises all of continental US except Ariz. Calif. Colo., Idaho, Mont., Nev., N M., Ore., Utah, Wash., Wyo., and the western part of Texas.			
Hydrobromic acid, medicinal, 48%, cbys. frt equaid	lb.	.48	.56
Hydrochloric acid, anhyd (see Hydrogen chloride).			
Hydrochloric acid, 18° cbys., c.l., works	100 lbs	2.50	—
cbys., l.c.l., dlvd Metropolitan area	100 lbs	2.90	3.05
tanks, works, frt. equaid	ton.	28.00	—
20°, cbys., c.l., works	100 lbs.	2.75	—
cbys., l.c.l. dlvd Metropolitan area	100 lbs	3.15	—
tanks, works, frt. equaid	ton.	30.00	—

TENNESSEE CORPORATION

We mine Copper, Sulfur, Iron and Zinc and are basic producers of their chemical derivatives. Our basic position in these elements is your assurance of exacting quality control from raw materials to finished product.

COPPER
SULFUR
IRON
ZINC
MANGANESE
FLUORINE

Copper Carbonate
Copper Sulfate
Copper Sulfate, Monohydrated
Chlorosulfonic Acid
Para Toluene Sulfonic Acid, Anhydrous
Sodium Hydrosulfite
Sulfonates
Sulfonic Acids
Sulfur Dioxide
Sulfuric Acid
Ferric Iron Sulfate
Zinc Oxide
Zinc Sulfate, Monohydrated
Manganese Sulfate
Manganous Oxide
Potassium Silicofluoride
Sodium Silicofluoride

TENNESSEE CORPORATION
612-629 Grant Building, Atlanta 3, Georgia

Hydrochloric acid, 22°, cbys., c.l., works 100 lbs 3.25 - —
cbys., l.c.l., divd Metropolitan area 100 lbs 3.65 - —
tanks, works, frt equald ton 35.00 - —
Hydrochloric acid CP, USP, consumers chys, extra, c.l., works lb .15¾- —
cbys, l.c.l., same basis lb .17¼- .17¾
Hydrochloric acid, 5-pint bots., extra cs., c.l., same basis lb .20¾- —
Hydrocortisone acetate, bulk, bots., kilo lots or more gram .95 - —
Hydrocortisone alcohol, bulk, bots., kilo lots or more gram 1.00 - 1.90
Hydrocyanic acid, dilute, NF, 2% 5-pint bots., f.o.b. works, pint .70 - —
Hydrofluoric acid, anhyd. (see Hydrogen fluoride)
Hydrofluoric acid, aqueous, 70%, 55-gal or 30-gal dms c.l., t.l., divd 100 lbs 19.25 - —
55-gal dms., l.c.l., t.l.t., divd 100 lbs 20.75 - —
20-gal dms., c.l., t.l., divd 100 lbs 21.00 - —
Hydrofluoric acid, aqueous, 70%, 20-gal., dms., l.c.l., t.l., divd 100 lbs 22.50 - —
tanks, works frt equald 100 lbs 13.40 —
Delivered prices apply to all states east of Arizona California Colorado Idaho, Montana, Nevada, New Mexico Oregon Washington and Wyoming In those states add $2.70 per cwt. for drum delivery
Hydrofluosilicic acid dms, works, 30% basis lb .07 - —
Hydrofuramide dms, tib ctns., works lb .30 .40
50-lb cyls., t.c.l., works lb .55 .60
Hydrogen chloride anhyd., 50-lb. cyls, t.c.l works lb .45 - —
Hydrogen cyanide liq, 98% tanks, works lb .14 - —
Hydrogen fluoride, anhyd., cyls., divd E lb .30½ .32½
cyls., divd W lb .39 —
tanks works lb .18 —
Hydrogen peroxide 35% dms., c.l., divd lb .202 —
dms., t.c.l., divd. lb .211 —
tanks, divd lb .1800- —
Hydroquinone, photo grade, dms., 50-lbs, f.o.b works lb 1.10 —
Tech, dms, c.l., divd lb .82½- —
dms, l.c.l, divd lb .84½- —
Hydroquinone monomethyl ether, dms, t.l. divd lb 2.59 - —
dms, t.t.l. divd lb 2.61 - —
Hydroxyacetic acid, tech., 70% dms, Philadelphia and Chicago lb .11 - —
tanks Helle W Va lb .073 - —
Hydroxycitronellal, cns. lb. 5.70 - 6.00
Hydroxyethyl cellulose, all grades, fib dms, 20,000 lb lots or more, f.o.b shipping point lb .84 - —
fib dms, 2,000 to 19,999 lb lots, same basis lb .89 - —
fib dms, 100 to 1,999 lb lots, same basis lb .93 - —
fib dms., smaller lots, same basis lb 1.03 —
Hyoscine salts (see Scopolamine)
Hyoscyamine hydrobromide, bots oz 7.75 8.50
Hyoscyamine sulfate, bots oz 7.75 8.50
Hypophosphorous acid, purif., 50% 10-chys, f.o.b works lb 1.95 —
NF 50% 10-chys, same basis lb 1.35 —

I

Ichthammol NF dms lb .75 1.05
Indigo (see Dyes, coaltar, 1171 indigo, syn.)
Indole CP bots. lb. 13.75 -15.00
Inositol, 50-100 lb dms., 1,000 lbs or more, divd lb 4.50 —
Inositol, 50-lb. dms, less than 1,000 lb., divd lb 4.75 - —
10 lb cns., 10-50 lbs divd lb 5.00 - —
5 lb bots, divd lb 5.25 - —
Insect flowers (see Pyrethrum)
Iodine, crude, kgs. lb. 1.10 - —
Resub., USP, dms., f.o.b. works lb 2.20 - 2.22
Iodochlorohydroquinolin USP dms lb 3.60 —
Iodoform NF dms, 300-lbs f.o.b works lb 4.90 —
dms, 100-lbs, same basis lb 5.05 —
a-Ionone cns lb 4.60 5.75
b-Ionone cns lb 4.15 6.15
Ipecac root, whole, bgs lb. 7.50 - 8.00
Powd., bbls., bxs lb 9.00 - 9.50
Irish moss, bleached, prime, bls lb .25 .27
Iron blue alkali-resisting, bbls, c.l., divd, E lb .60 - —
bbls, l.c.l, ton lots same basis lb .61 - —
bbls., smaller lots, same basis. lb .62 - —
Dom., reg, bbls., c.l., divd, E lb .55 - —
Iron blue, alkali-resisting dom., reg., bbls., c.l., ton lots, same basis lb .56 - —
bbls, l.c.l, smaller lots same basis lb .57 - —
Imp, British, reg, bbls, c.l, divd, E lb .48 - —
bbls, l.c.l, ton lots same basis lb .49 - —
Iron blue, British, reg., bbls., l.c.l., smaller lots, same basis lb .50 - —
Iron blue divd, prices to highest for Pacific Coast states: Wash., Ore., Cal., N M., Ariz., Mont, Wyo, Utah Col and Nev
Iron compounds (see Ferric or Ferrous).
Iron oxide, black, pure bgs., c.l., works lb .14¾- —
bgs, l.c.l., works lb .15 —
Iron oxide, brown, pure bgs., c.l., works lb .14¼ —
bgs., l.c.l., works lb .14½ —
Iron oxide, metallic, brown, bgs., works lb .05½- —
Iron oxide, Persian Gulf, red, bgs., c.l., works lb .08¾- —
Iron oxide, red, dom., pure bgs., Bethlehem, E St Louis, New York City lb .14¼- —
Iron oxide, red, nat, 75-85% ferric oxide bgs., c.l., works lb .06¼ —
bgs, l.c.l, works lb .06½ —
Iron oxide, Spanish, red, bbls., c.l., ex dock lb .05¾ Nom.
bbls, l.c.l, ex dock lb .06 Nom
bbls, l.c.l, ex whse New York lb .06½ Nom.
Iron oxide, yellow, nat., French type bgs., c.l., works lb .06¾- .07
Peruvian type bgs, l.c.l lb .023 .024
Iron oxide, yellow, pure, light lemon shade bgs, c.l, works lb .12¼- —
other shades, same basis lb .12 - .12½
Isoamyl alcohol, dms, c.l, works, frt alld E lb .27½- —
dms, l.c.l., same basis lb .29 - —
tanks, same basis lb .25 —
Isoborneol, cns. lb. 1.44 - 1.80
Isobornyl acetate, cns. lb .46 .56
Isobornyl formate, dms. lb. 1.15 - 1.20
Isobornyl propionate, dms. lb. 1.20 - 1.25
Isobutyl acetate, perfume grade cns lb .30 - .35
Isobutyl acetate, solvent grade dms., c.l., divd E. of Rockies lb .15¼- —
dms., l.c.l., same basis lb .16¾- —
tanks, same basis lb .12¾- —
Isobutyl alcohol, dms., c.l., divd lb .15½- —
dms., l.c.l., divd. lb .17 - —
tanks, divd lb .13 - —
Isobutylene, 99% tanks, works gal. .38 - —
Isobutyl isobutyrate, dms., f.o.b. works lb .75 - —
Isobutyraldehyde, CP, dms., c.l., divd lb .27½- —
dms., l.c.l., divd. lb .28½- —
Tech., dms., c.l., divd. lb .22 - —
dms., l.c.l., divd. lb .23 - —
tanks, divd. lb .19½- —
Isobutyric acid, dms, c.l., t.l., divd. lb .35 - —
dms., l.c.l., t.l. same basis lb .36½- —
t.c.t.t., same basis lb .33 - —
Isobutyronitrile, dms., c.l., divd. lb .47½- —
dms., l.c.l., divd lb .48½- —
tanks, divd. lb .45 - —
Isoeugenol cns. lb 3.40 4.25
Isoniazid, powd., bulk, 50 kilos kilo. 12.00 - —
Isonicotinic acid, 100-lb tib dms., works lb 4.25 - —
Isonicotinic acid hydrazide (see Isoniazid)
Iso-octyl alcohol, dms., c.l., divd E. lb .23½- —
dms., l.c.l., divd E. lb .25 - —
tanks, divd E lb .21 - —
Isopentane, coml, grade, tanks, f.o.b Tex refy gal. .16½- —
Isophorone, dms., c.l., divd lb .24½- —
dms., l.c.l., divd lb .25¼- —
tanks, divd lb .22½- —
Isophthalic acid, dms., c.l., works, frt equald lb .18 - .19
dms., l.c.l., same basis lb .19 - .20
Isopropanol (see Isopropyl alcohol).
Isopropyl acetate dms, c.l, divd. lb .1[illegible] - —
dms., l.c.l., same basis lb .15½- —
tanks, same basis lb .11½- —
Isopropyl alcohol, refd., 91%, dms., c.l., divd gal. .58 - —
dms., l.c.l., divd. gal. .68 - —
tanks, divd gal. .42 - —
Isopropyl alcohol, refd., 95%, c.l., dms, divd gal. .60 - —
dms., l.c.l., divd gal. .70 - —
tanks, divd. gal. .44 - —
Isopropyl alcohol, anhyd., c.l., divd. gal. .62 - —
dms., l.c.l., divd. gal. .72 - —
tanks, divd gal. .46 - —
Isopropyl benzene (see Cumene)
Isopropyl ether, dms., c.l., divd lb .09½- —
dms., l.c.l., divd. lb .11 - —
tanks, divd lb .07 - —
Isopropyl-N-(3-chlorophenyl) carbamate (CIPC) tech., dms., c.l. t.l. works lb 1.00 —
dms., l.c.l., works lb 1.05 1.25
tanks, works lb .99 —
Isopropylamine (see Mono, Di, or Tri-).
Isopropyl-N-phenyl carbamate 450-lb fib dms, c.l., t.l., works lb .75 —
450-lb fib dms, l.c.l. works lb .80 .90
Isoquinoline, dms., works lb 65 1.25
Itaconic acid, refd, bgs c.l. f.o.b works lb .39½- —
bgs., l.c.l., same basis lb .41 - .43
Tech., bgs., c.l., same basis lb .34½- —
bgs., l.c.l., same basis lb .35½- —

J

J acid, paste bbls., works, 100% basis lb 2.70 - —
Powd., bbls, same basis lb 2.75 - —
Jalap root, NF bls lb .60 - —
NF powd, bbls, bxs. lb .70 .75
Japan wax, cs. lb .29 .31
Juniper berries, bgs. lb .16 .17
Juniper berry oil NF, bots, ... lb 2.90 3.75
Twice rectified, bots lb 3.25 —
Juniper tar oil NF dms lb .42 .60
Juniper wood oil, tech. cns. lb .38 .55

K

Kaolin (see also Clay, China).
Kaolin NF, powd., fib dms lb .10 - .12
NF colloidal 50-lb bgs lb .15½- .17½
Karaya gum, No 1, NF powd., bls lb .48 .50
No. 2, powd, bbls. lb .43 .45
No. 3, powd, bbls lb .37 .40
Koch acid, bbls., frt. alld., 100% basis lb 1.00 —
Kola nuts, bgs. lb. .11 - .12

L

L acid, bbls., works lb. 1.25 - —
Lacquer diluent, petroleum, 140°F. 200°F b.r., tankcars, New Jersey and New York gal. .20 - —
Group 3 gal. .15125- —
Houston, Texas gal. .16 —
Lacquer diluent, petroleum, 200°F-240°F b.r., tankcars, New Jersey or New York gal. .20 - —
Group 3 gal. .14125- —
Houston, Texas gal. .16 —
Lactic acid, edible, 50%, bbls, dms., c.l., frt. equald lb. .1985- —
bbls., dms., 20 or more, frt. equald lb. .2035- —
bbls., dms., 5 to 19 frt equald. lb. .2085- —
bbls., dms. 1 to 4, frt equald. lb. .2135- —
Lactic acid, edible, 80% bbls., c.l., dms., frt equald lb. .3335- —
bbls., dms., 20 or more, frt equald lb. .3385- —
Lactic acid, edible, 80% bbls., dms., 5 to 19, frt. equald lb. .3435- —
bbls., dms. 1 to 4, frt equald. lb. .3485- —
Plastic grade, 50% c.l., bbls., works lb .2740- —
bbls., 20 or more, works lb .2790- —
bbls, 5 to 19 works lb .2840- —
bbls., 1 to 4, works lb .2890- —
80%, bbls., c.l. works lb .4625- —
bbls, 5 to 19 works lb .4725- —
bbls, 1 to 4, works lb .4775- —
Lactic acid, tech., 44%, bbls., c.l., works 100 lbs. 12.45 - —
bbls., l.c.l., works 100 lbs 12.85 - —
USP 85% chys lb .85 - —
Lactose, crystalline, edible, bgs., 25,000-lb lots, frt equald lb. .14 - —
bgs., 6,000-lb lots, frt equald lb .14½- —
bgs., 2,000-lb lots frt equald lb .14¾- —
bgs., 200-lb lots, frt equald lb .15¼- —
Edible lactose in fib dms, ½c higher
Lactose, ferment, grade, bgs., c.l., works lb. .08¾- —
Lactose, USP, reg., fib dms., 30,000-lb lots, frt. equald lb. .21½- —
fib dms., 2,000-lb lots, frt. equald lb. .22¼- —
200-1,880-lb. lots, frt. equald lb. .22¾- —
USP lactose in bags ½c to 1c lower
Lactose, USP spray dried, bgs., t.l., frt equald lb. .18½- —
bgs., t.l., frt equald lb .19 .19¾
Lady's slipper root, bls lb. 3.00 3.50
Lamp black, bgs., c.l., works lb. .16 - .45
Lanolin, USP anhyd, 400-lb dms., works lb. .24 - .26
USP, annyd., cosmetic, 400-lb dms., works lb. .26 - .30
USP hydrous, 400-lb dms., works, lb .20 —
Lard, cash, dms., Chicago lb. .12275- —
Lard oil (see Grease oil).
Larkspur seed bgs lb .55 —
Laurel leaf oil, dms, cns. lb 9.75 -12.50
Laurent's acid bbls lb 70 —
Lauric acid, pure, dms. lb. .30¼- .32¾
bags lb. .28¾- .31¼
tanks lb. .27¾- —
Lauryl alcohol, bots lb. 2.00 2.50
n-Lauryl methacrylate, dms., c.l., t.l., works lb. .65½- —
dms, t.t., works lb .66 —
Lavandin oil, 22-24%, dms. lb. 1.15 - —
Abrial, dms. lb. 1.20 - —
Lavender flowers, medium, bls lb .55 - .60
Ordinary bls lb .20 - .25
Select, bls lb .90 - 1.00
Lavender flower oil, USP, French, 35-37% ester, cns lb 1.85 4.00
40-42% ester, cns lb 5.00 7.75
Spike, Spanish, cns lb. 1.75 - 2.00
Lead acetate, NF cryst., gran., powd., bbls lb. .34½- —
White, cryst., bbls. lb. .25½- —
gran, bbls. lb. .26½- —
powd, bbls lb. .26½- —
Lead arsenate acid powder, dealers, 3-50-lb bgs or any quantity frt alld on $150 or more lb .30½- —
1-lb bgs, same basis lb .47 —
Lead, blue basic sulfate, bbls, c.l., shipt point, frt alld lb .17 - —
bbls, l.c.l, same basis lb .18 - —
Lead carbonate (see Lead, white, basic carbonate)
Lead chloride, dms lb .52 - —
Lead iodide NF V jars lb 3.82 - —
Lead linoleate, fused, 26.5% Pb, dms, lb .38 - —
Lead metal, prime, pigs, New York, lb. .11 - —
St. Louis lb. .1080- —
Lead monosilicate, bgs., c.l., works, frt equald lb. .1385- —
bgs, t.c.l., same basis lb. .1485- —
Lead naphthenate, liq, 16% Pb., dms, divd lb. .19½- —
24% Pb, dms, divd lb. .24¼- —
Solid, 47% Pb, dms divd lb .31¾- —
Lead nitrate, bbls lb. .24¼- .26¾
Lead orthosilicate gel, 50-60% PbO, dms works lb. .29¾- .34¼
Lead peroxide tech powd, bbls lb. .45 - .50
Lead phthalate dibasic, dms, works, lb .41 - —
Lead, red, 95% Pb_3O_4, or less, bbls., c.l., works, frt equald, lb. .1375- —
bbls., l.c.l., same basis lb. .1475- —
Lead, red, 97% Pb_3O_4, bbls., c.l., same basis lb. .1375- —
bbls., l.c.l., same basis lb. .1475- —
Lead, red, 98% Pb_3O_4, bbls., c.l., same basis lb. .1410- —
bbls., l.c.l., same basis lb. .1510- —
Lead, resinate precip., 23%Pb dms., lb. .49 - —
Lead salicylate, normal dms, works lb. .46 —
Lead silicate (see Lead white basic silicate).
Lead silicochromate, bgs., c.l., f.o.b mfrs point frt alld lb .20 - —
bgs, t.c.l., same basis lb .21 - —
Lead sulfate (see Lead blue basic sulfate).
Lead tallate, liq, 16% Pb, dms lb .17¼- —
24% Pb, dms lb. .21¼- —
Solid, 30% Pb, dms lb. .26¾- —
Lead white, basic carbonate, bgs., c.l. shipt pt., frt alld lb. .18 - —
bgs, t.c.l, same basis lb. .19 - —
basic silicate, bgs, c.l., shipt, pt frt alld lb. .16½- —
Lead white, basic silicate, bgs., c.l., shipt, pt., frt, alld lb. .17 - —
bgs., l.c.l., same basis lb. .18 - —
Lecithin, edible, tech, bleached, non-ret dms., c.l., works, lb. .14 - .15
non-ret dms., t.c.l., same basis lb. .15 - .16
Lecithin, edible, tech., unbleached, non-ret dms, c.l, same basis lb. .13 - .14
non-ret dms., t.c.l., same basis lb .14 - .15
Lemon bioflavonoid complex, 50 kilos, f.o.b. works kilo. 14.20 - —
Lemon oil, USP, Calif., cns., dms lb 1.25 1.50
Messina cns lb 3.25 4.00
Lemongrass oil, cns., dms lb 2.45 - 2.50
di-Leucine, dms, 1 kilo, works kilo. 50.00 - —
Licorice root, gran, nls lb 13 - —
Powd, bls lb 15 - .16
Whole, bls lb .09 .10
Lignaloe wood oil, Mexican, cns lb 2.75 3.50
Lignosulfonate (see under Ammonium or Sodium lignin sulfonate)
Lilac oil lb. 1,500.00
Lime, chemical (quicklime), bulk, c.l. 50,000 lbs works E ton. 14.25 - —
Chemical, hydrated, bgs., c.l., same basis ton. 17.25 - —
spray bgs, c.l. same basis ton 18.25 —
For New York delivery add $6.29 freight charge
Lime oil, dist., Mexican, dms lb. 5.00 - 5.60
West Indian, dms lb. 5.00 - 5.60
Expressed, West Indian, dms lb. 6.50 - 7.75
Lime salts (see Calcium)
Lime-ammonium nitrogen, 20.5% N (see Ammonium nitrate with dolomite).
Linalool ex bois de rose oil, dms lb 2.45 4.25
Syn, 98-100% dms, works lb 2.40 2.75
Linalyl acetate ex bois de rose 90-92% dms lb 2.65 4.50
96-98% dms lb 3.25 —
Syn., 98-100% dms., works lb 2.75 - —
Lindane, 25% formulation to distributors dms, frt alld lb. 1.35 - 1.50
Lindane, tech., to formulators, 250-lb dms, 5,000 lbs, dlvd, lb 2.13 - —
100-lb dms, 5,000-lbs, divd lb 2.15 - —
250-lb dms, less than 5,000-lbs, divd lb 2.18 - —
100-lb dms, less than 5,000-lbs, divd lb 2.20 - —
Linden flowers, with leaves bls lb. .35 - .40
Without leaves bls lb .42 - .45
Linseed meal, expeller, 32% bulk, Minneapolis, mills ton. 61.50 - —
Extracted, 34% bulk, same basis ton. 55.50 - —
Linseed oil, raw, dms., c.l., New York lb. .1670- —
dms., l.c.l., New York lb. .1760- .1810
tanks, f.o.b. Minneapolis lb. .1310- —
tanks, New York lb. .1422- —
tankwagon, New York lb. .1472- —
Boiled linseed oil, .006c. per lb. higher.
Linseed oil acid, dist., dms lb. .2030- —
Water white, dms lb. .2330- —
Litharge, coml., powd., bbls., c.l., works, frt. equald lb. .1325- —
bbls., l.c.l., same basis lb. .1425- —
Lithium aluminum hydride, lump, dms., works lb. 33.00 -39.00
Lithium benzoate, dms. lb. 1.65 - 1.67
Lithium bromide, NF, gran., bgs., works, frt. equald lb. 2.60 - —
Lithium carbonate, NF, dms., ton lots lb. .58 - —
dms., 1,999 lbs. or less lb. .64 - —
Tech., dms., ton lots lb. .57 - —
dms., 1,999 lbs. or less lb. .63 - —
Lithium chloride, CP, anhyd., dms., ton lots lb. 1.23½- —
Tech, anhyd, dms., c.l., t.l., divd, or works, frt alld lb. .87 - —
dms, l.c.l, same basis lb. .88 - .93
Lithium citrate, NF dms, ton lots, lb. 1.50 - —
Lithium fluoride, dms., 20,000-lb. lots, divd lb. 1.75 - —
bbls., ton lots and more, divd lb. 1.85 - —
bbls., less ton lots, divd lb. 1.90 - —
Lithium hydride, powd., dms., 500-lbs lots or more, works, lb. 9.50 - —
Lithium hydroxide, monohydrate, dms., c.l., t.l., frt. alld lb. .60 - —
dms., l.c.l., frt. alld lb. .64 - —
Lithium manganite, dms., works lb. .95 - 1.05
Lithium nitrate, tech, dms., 100-lb lots lb. 1.15 1.25
Lithium salicylate, dms. lb. 1.60 1.70
Lithium silicate, dms., works lb. 1.10 1.20
Lithium stearate, dms, c.l., works, lb. .47½- —
dms, ton lots works lb. .48½- —
dms., less-ton lots, works lb. .53½- —
Lithium sulfate, dms, 100-lb. lots, lb. 1.15 1.25
Lithium titanate, dms., works lb. 1.15 - 1.25
Lithol red toner, barium, bbls., works lb. 1.03 - —
Lithol-rubine red toner, pure, bbls., works lb. 1.65 - —
Resinated, bbls., works lb. 1.47 - —
Lithopone, ord, bgs., c.l., divd E, lb. .08¾- —
bgs., t.c.l., divd, E lb. .09½- —
Titanated (high-strength), bgs., c.l., divd lb. .11 - —
bgs, t.c.l, divd lb. .12 - —
Lobelia herb, bls lb. .95 - 1.10
Lobeline sulfate, bots., 50-oz. lots, works oz. 30.00 - —
Locust bean gum, powd., bgs. lb. .35 - .40
Lycododium, cs. lb. 2.50 - 3.00
l-Lysine monohydrochloride, 25-lb. dms lb. 4.95 - —

M

Mace, Siauw, No. 1, bls. lb. 1.58 - —
No. 2 whole, bls lb. 1.40 - —
siftings, bls lb. 1.35 - —
Mace oil, dist., cns., dms lb. 9.00 -11.00
Magnesia, calcined, tech., bgs., c.t.n.s., frt equald lb. .25¾- .26½
Tech, syn., rubber grade, light, bgs., c.l., frt. equald lb .28¾- .30
rubber grade, extra light, bgs., c.l., frt. equald lb .28 - —
bgs, t.c.l., frt. equald lb .28¾- —
Above prices are quoted f.o.b. works, freight equald., with Metropolitan New York and competitive producing points
Magnesia, calcined, tech., heavy, 85% bgs., c.l. f.o.b Lunning, Nev ton. 39.50 - —
91%, bgs., c.l., same basis, ton. 49.50 - —
95%, bgs., c.l., same basis, ton 59.00 - —
USP, light, bgs. lb. .36½- .37½
USP, heavy, bgs lb. .36½- .37½
Magnesite, chemical grade, calcined, powd., bgs., c.l., works, frt equald ton. 86.25 - —
Chemical grade, deadburnt, standard grain, bulk, c.l., Chawelah, Wash ton. 46.00 - —
Magnesium bromide, 80-lb. dms., f.o.b. works lb. 1.15 - —
Magnesium carbonate, tech, bgs., c.l., frt. equald lb. .11 - —
bgs., t.l., frt. equald lb. .11½- —
bgs., t.c.l., frt equald lb. .13½- .14
Magnesium carbonate, USP, bgs., c.l., frt. equald lb. .13½- —
bgs., t.l., frt equald lb. .14 —
bgs., t.c.l., frt equald lb. .15 .16
Above prices are quoted f.o.b. works, freight equald., with Metropolitan New York and competitive producing points.
Magnesium chloride, anhyd., 92%, flake or pebble, drums., c.l. works lb. .12¾- —
dms., t.c.l., works lb 14 .15
Magnesium chloride, hydrous, 99%, flake, bgs., c.l., works ton. 60.00 —
bgs., t.c.l., works ton. 75.00 -100.00
Magnesium gluconate 100-lb. dm., f.o.b. works, E lb. 1.42 —
Magnesium hydroxide, NF, powd., dms., 500-lbs. or more, f.o.b works lb. .24½- .25½
Magnesium lauryl sulfate, dms., c.l., frt. alld lb. .22½- —
dms., t.t.l., frt alld lb. .23½- —
tanks, frt alld lb. .21½- —
Magnesium metal, 99.8%, ingots, 10,000-lb. lots or more, works lb .36 - —
pigs, 10,000-lb. lots or more, works lb. .35¼- —
sticks, cs., works, frt. alld on carlots lb. .59 - —
Magnesium nitrate, cryst., dms., works lb. 29 - —
Magnesium oxide (see Magnesia, calcined).
Magnesium phosphate, tribasic, NF, bbls lb. .75 - —
Magnesium silicate (see Talc)
Magnesium silicofluoride, dms., works lb .10½- .12
Magnesium sulfate, tech., bgs., c.l., works 100 lbs. 2.15 —
bgs, t.c.l., works 100 lbs. 2.90 - 3.15
USP, cryst., bgs., c.l., works, 100 lbs. 2.35 - —
bgs, t.c.l., 5,000 lbs., 1 withdrawal 100 lbs 3.10 - —
bgs., smaller lots 100 lbs. 3.35 - —
Magnesium trisilicate, USP, fib dms., 5,000-lb. lots lb .38 - —
fib dms., 1,000-lb. lots lb .40 - —
fib dms., 100-lb. lots lb .45 - —
Bulky and super grades of magnesium trisicilate 7c per lb. higher.
Malachite green, straight, PTA, bbls., works lb 5.30 —
Malathion, dms., c.l., works lb .89 —
dms., t.c.l., works lb .92 1.01
Maleic acid, cryst., powd., dms lb. .37¼ —

Maleic anhydride, dms., c.l., frt. equald ..lb. .24 - —
dms., l.c.l., frt. equald ..lb. .25½- —
tanks, frt equald ..lb. .22½- —
Maleic anhydride in bags ½c. per lb. less.
Malic acid, tech., dms ..lb. .50 - —
Mandelic acid, NF, dms., 1,000-lb. lots. lb. 2.35 - —
dms., smaller lots ..lb. 2.40 - 2.50
Mandrake root, bls ..lb. .45 - —
Manganese acetate, dms., dlvd ..lb. .35 - —
Manganese borate, tech., fib. dms. lb. .23½- —
Manganese carbonate, chemical grade, 46% Mn, bgs., 20,000-lb. lots and more, works lb. .11 - .16
Manganese chloride, CP, anhyd., dms., 20,000-lb. lots, works lb. .21¾- —
smaller lots, works ..lb. .23½- —
Manganese dioxide, African, 83-87%, 40,000 to 99,999-lb. lots, burlap paper lined bgs., gross for net works ton.148.00 - —
40,000 to 99,999-lb lots, paper bgs., same basis ton.144.50 - —
40,000 to 99,999-lb. lots, dms. same basis ton.152.50 - —
Prices for manganese dioxide in 10,000 to 40,000-lb lots, $3 per ton higher
Manganese gluconate, dms ..lb. 1.84 - —
Manganese hydrate, dms., dlvd lb. .35 - —
Manganese hypophosphite, NF dms. lb. 3.52 - —
Manganese linoleate, liq., 4.35% Mn, dms lb. .35¾- —
Solid, precip., 8.2% Mn, bbls lb. .41¼ —
Manganese metal, electrolytic, dms., c.l., dlvd, E lb. .34½- —
dms., ton lots, dlvd, E ..lb. .37 - —
dms., smaller lots, dlvd E lb. .39 - —
Manganese naphthenate, liq., 6% Mn, dms., frt. alld lb. .29¾- —
Manganese resinate, fused, 3½% Mn, dms lb. .29¼- —
Precip., 6½-7% Mn, dms. ..lb. .42 - —
Manganese sulfate, fertilizer grade, 65% $MnSO_4$, bgs., c.l., dlvd, S., E ton.86.50 - —
bgs, t.c.l., dlvd, S., E ..ton.93.50 - —
Manganese tallate 6%, dms. ..lb. .26½- —
Manila copal gum, C, bgs ..lb. .35 - .39
DBB, bgs ..lb. .25 - .28
DK, dust, bgs. ..lb. .14 Nom.
MA, soft, bgs. ..lb. .20 - .24
WS, bgs ..lb. No stocks.
Mannitol, com'l, fib dms., ton lots, works lb. .60 - —
fib, dms., to ton lots, works lb. .62 - —
fib, dms., single dm., works..lb. .65 - —
Marine pitch, dms. ..lb. .04¼- .05
MBTS (see Mercaptobenzothiazyl disulfide).
MBT (see 2-Mercaptobenzothiazole).
Melamine, bgs., c.l., works ..lb. .26½- —
bgs., l.c.l., works ..lb. .28 - —
Menadione, USP bots. ..gram. .044 - .05
Menhaden oil, crude, tanks, works, Atl. & Gulf lb. .06¼- —
Menthol, nat. USP, Brazilian, large crystals, cs lb. 8.40 - —
Nat., USP, Brazilian, regular crystals, cs. lb. 8.25 - —
Japanese cs. ..lb.10.50 -12.00
Syn., USP, racemic, 25-lb. lots lb. 4.25 - —
2-Mercaptobenzothiazole, bgs., fib, dms., ton lots, works, frt. alld lb. .44 - —
bgs., fib, dms., less ton lots, same basis lb. .46 - —
Mercaptobenzothiazyl disulfide, bgs., fib dms., ton lots, works, frt. alld. lb. .54 - —
bgs., fib. dms., less ton lots, same basis lb. .56 - —
Mercuric chloride, NF, crystals., dms., 100 lbs., f.o.b works lb. 4.03 - —
USP, gran. or powd., 50-lb. dm., 100 lbs., f.o.b. works lb. 3.78 - —
Mercuric cyanide, NF VIII, powd., fib dms lb. 5.84 - —
Mercuric iodide, red, NF, 100-lb. dm., f.o.b. works lb. 6.97 - —
Mercuric oxide, red, NF IX, 50-lb. dm., 100 lbs., f.o.b. works. lb. 4.73 - —
tech., 50-lb. dm., 100 lbs., same basis lb. 4.52 - —
Mercuric oxide, yellow, NF, 50-lb. dm., 100 lbs., same basis. lb. 4.89 - —
tech., dms., 100 lbs. ..lb. 4.55 - —
25-lb. fib dm. ..lb. 4.38 - —
Mercurous chloride (see Calomel).
Mercurous iodide, yellow, NF, 100-lb. dm., f.o.b works lb. 8.22 - —
Mercury, ammoniated (see White precipitate USP XV).
Mercury metal, 76 lbs. per flask, net-flask.208.00 -211.00
Mesityl oxide, dms., c.l., dlvd ..lb. .15 —
dms., l.c.l., dlvd. ..lb. .16½- —
tanks, dlvd. ..lb. .12½- —
Meta-aminophenol (see m-Aminophenol).
Metachloroaniline (see m-Chloroaniline).
Metanilic acid, dms., works ..lb. .57 - .75
Metanitroparatoluidine (see m-Nitro-toluidine).
Metanitroaniline (see m-Nitroaniline).
Metaphenylenediamine (see m-Phenylenediamine).
Metatoluidine (see m-Toluidine).
Metatolylenediamine (see 2,4-Tolylenediamine).
Methacrylic acid glacial, 98%, dms., truckloads frt. equald lb. .42½- —
dms., smaller lots, frt. equald. lb. .43 - .75
tanks works, frt. equald lb. .40 - —
Methanol, nat, denaturing grade, tanks, frt. alld gal. .35 - —
Syn., zone 1, dms., c.l., or t.l. min., dlvd gal. .51½- —
dms., t.c.l., dlvd. gal. .61½- —
tankwagon, 2,000-4,000 gal. lots, dlvd, Metropolitan area gal. .33 - —
tankwagon, 4,000 gal. min., dlvd gal. .30 - —
tankwagon, 4,000 gal. min., f.o.b. terminal gal. .29 - —
Methanol, syn., zone 2, dms., c.l., or t.l., min. frt. alld. or dlvd. gal. .55½- —
dms., t.c.l., works gal. .65½- —
tankwagon, 2,000-4,000 gal. lots, min., dlvd., Metropolitan area gal. .39 - —
tanks, 4,000 gal. min., dlvd. gal. .34 - —
Synthetic methanol zones are: Zone 1 is all continental US E. of eastern boundaries of Ariz., Idaho and Utah. Zone 2 is remainder of US west of above state boundaries comprising Ariz., Calif., Idaho, Nev., Ore., Utah and Wash.
Methapyrilene fumarate, 100-999 lbs., dms., f.o.b. works, frt. equald. lb.21.75 - —
Methapyrilene hydrochloride, 100-999 lbs., dms., f.o.b. works, frt. equald. lb.27.25 - —
Methenamine (see Hexamethylene-tetramine).
Methionine hydroxyanalogue, (calcium salt) 90% min., dms., t.l., frt. alld. ..lb. 1.10 - —
dms., t.t.l., same basis ..lb. 1.15 - —
dl-Methionine, fib, dms., frt. alld., 50-lb or more lb. 2.50 - —
Feed grade, 98% fib dms., same basis. lb. 1.42 - —
Methoxychlor, 50% wettable powder, dealers, dms., cs lb. .66 - —
Methyl abietate, non-ret dms., c.l., dlvd zone 1 lb. .21½- —
non-ret, dms., l.c.l., same basis lb. .22 .23½
Methyl abietate, hydrogenated, non-ret. dms., c.l., dlvd zone 1 lb. .23½- —
non-ret. dms., l.c.l., same basis. lb. .24 .24½
Zone 1 includes New England and Middle Atlantic states, Va., W. Va., N. C., Ohio, Ky., Mich., Ind., Ill., Wis., St. Paul and Minneapolis, Minn.; St. Louis, Mo.; Miss., Ala., Ga., Fla., S. C. and Tenn.
Methyl acetone, nat. dms., t.c.l., E of Miss., frt alld gal .62½- —
Methyl acetone, syn. dms., c.l. frt. alld E gal. .66 - —
Methyl acetone, syn., dms., l.c.l., frt. alld. E gal. .76 - —
tanks frt alld E. gal .51 - —
Synthetic methyl acetone E. territory comprises all states East of and including Colo., Mont., N. Mex. and Wyo. West territory is made up of all states west of those four.
Methyl acrylate, dms., c.l., t.l., dlvd. lb. .35¼- —
dms., l.t.l., dlvd ..lb. .36¼- —
tanks, dlvd. ..lb. .32¼- —
Methyl alcohol (see Methanol).
Methyl amyl acetate, dms., c.l., dlvd, E lb. .17 - —
dms., t.c.l., dlvd, E. ..lb. .18½- —
tanks, dlvd, E. ..lb. .14½- —
Methyl amyl alcohol, dms., c.l., dlvd. lb. .17 - —
dms., t.c.l., dlvd. ..lb. .18½- —
tanks, dlvd. ..lb. .14½- —
Methyl amyl ketone, dms., c.l., t.l., f.o.b. works lb. 1.99¼- —
dms., l.c.l., same basis ..lb. 2.00 - —
N-Methylaniline, tech., tanks, frt. alld lb. .60 - —
Methylanthranilate, cns. lb. 2.25 2.45
Methyl benzoate, cns., dms. lb. .60 .75
Methyl bromide, service organization prices, 40 to 375-lb. cyls., large lots, frt. alld lb. .62 - .72
on 100 lbs lb. .73 - .79
Methyl cellulose, special vis., (1,500-4,000 cps.) 50-lb. bgs., c.l., works lb. .82 - —
50-lb. bgs., 2,000-lb. lots and more, same basis lb. .89 - —
50-lb. bgs., smaller lots, frt. alld on 100 lbs lb 1.05 - —
Methyl cellulose, standard vis. (15,-400 cps.) 50-lb. bgs., c.l., frt. alld lb. .69 - —
50-lb. bgs., 2,000-lb lots and more, same basis lb. .76 - —
50-lb. bgs., smaller lots, frt. alld. lb.
Methyl chloride, indust., cyls., frt. equald lb. .22¼- —
tanks, multi-unit, same basis. lb. .16¼- —
tanks, single unit, same basis. lb. .12¾- —
Methyl chloride, refrigerator mfrs., cyls., dlvd lb. .48¾- —
Other consumers or service men, cyls., dlvd lb. .67¾ —
Methyl chloroform (see 1,1,1-Trichloroethane).
Methyl cinnamate, cns ..lb. 1.55 1.80
Methyl ethyl ketone, dms., c.l., dlvd lb. .15 —
dms., t.c.l., dlvd ..lb. .16½- —
tanks, dlvd. ..lb. .12½- —
2-Methyl-5-ethyl pyridine, dms., c.l., works lb. 45 —
dms., t.c.l., works ..lb. 45¾- —
tanks, works ..lb. 43 —
Methyl formate, refd., dms lb. .35 .40
Tech., non-ret dms., any quantity works lb. .10 —
tanks, works lb .07 - —
a-D Methyl glucoside, tech., 100-lb. multiwall paper bgs., c.l., works lb. .21 - —
100-lb. multiwall paper bgs., t.l., min 23,000 lbs., works. lb. 21½- —
100-lb multiwall paper bgs., l t l., works lb 23 —
Methyl heptin carbonate, bots lb.27 75 31.00
Methyl p-hydroxybenzoate, fib dms lb 1.90 2.00
Methyl ionone, standard, cns., dms. lb 3.40 3.85
Methyl isoamyl ketone, dms., c.l., dlvd lb. .20 —
dms., t.c.l., dlvd. ..lb. .20½- —
tanks, dlvd. ..lb. .17½- —
Methyl isobutyl carbinol (see Methyl amyl alcohol).
Methyl isobutyl ketone, dms., c.l., dlvd lb. .17 - —
dms., t.c.l., dlvd ..lb. .18½- —
tanks, dlvd ..lb. .14½- —

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Methyl methacrylate, dms., c.l., t.l., frt. equald, with Belle, W Va lb. .31 - —
dms., smaller lots, same basis lb. .31½- —
tanks, same basis lb. .29 - —
Methyl naphthyl ketone, cryst., cns. lb. 2.45 - 4.30
Methyl parahydroxybenzoate (see p-Hydroxybenzoate)
Methyl parathion, tech., 80%, dms., frt. alld. E lb. .84 - —
Methyl parathion prices 2c. per lb higher in West.
Methyl roseaniline chloride, NF., 5-lb fib. dms lb. 6.90 - —
Methyl salicylate, dms., t.l., frt. alld lb. .60¼- —
dms., t.c.l., same basis lb. .62½- .67½
Methyl testosterone, USP, 100-gram bots gram. No Prices.
2-Methyl-5-vinyl pyridine, 40-dm lots or more, f.o.b. works lb. 1.32 - —
5-39 dm lots, same basis lb. 1.37 - —
tanks, same basis lb. 1.27 - —
Methyl violet toner, molybdated, PMA bbls., dlvd. E of Rockies lb. 2.95 - —
Tungstated, PTMA, bbls., same basis lb 4.35 - —
Methyl violet prices 1c. higher W. of Rockies
Methylene blue, fib, dms., 100-lb. lots, frt. adjusted lb. 4.67 - —
Methylene chloride tech., straight or assorted, dms. c.l. or t.l., dlvd lb. .12½- —
dms. t.c.l., t.t.l. dlvd lb. .15¾ —
tanks, 4,000-gal. min., dlvd lb. .11¼- —
b-Methylnaphthalene, 32°C., m.p., dms., works lb .90 —
Methylpentanediol (see Hexylene glycol).
Methylphenylpyrazlone (see 1-phenyl-3-methyl-pyrazolone-5).
Methylthionine chloride (see Methylene blue).
Mica, dry-grd. paint, plastic, 100 mesh, bgs. c.l., works lb. .04 - —
roofing, 20 to 80 mesh, works lb. .03 - —
wet-grd. biotite, bgs., c.l., works, frt. alld. E lb. .06½- —
bgs. t.c.l., ex-whse. lb. .07¼- —
paint or lacq., bgs., c.l., 325 mesh works, frt. alld. E. lb. .08¼- —
bgs. t.c.l., ex-whse or freight alld. E lb. .09 - —
Mica, wet-grd., rubber, bgs., c.l., works, frt. alld E lb. .08 - —
bgs. t.c.l., ex-whse, or frt. alld. E lb. .08¾ - —
wallpaper, bgs., c.l. works, frt. alld. E lb. .08¾ - —
bgs., ex-whse or frt. alld E. lb. .09 - —
white, 5-10 microns, bgs., c.l., works, frt. alld. E lb. .08¼ - —
Mica, wet-grd. W. of Miss. ½c. higher; W. of Rockies 1c higher
Microcrystalline wax, petroleum, coating grades, tankcars, works lb. .10 - .11
laminating grades, tankcars, works lb. .11 .12
Mineral black, bgs., works lb. .0160- .0673
Mineral oil, white tech., 50-65 vis., non ret. dms., c.l., f.o.b. refy gal. .65 - —
50-65 vis. non-ret. dms., t.c.l., basis gal. .70 - —
tankcars, refy. gal. .49 - —
Mineral oil, white tech., 65-75 vis., non-ret. dms., c.l., same basis gal. .65 - —
non-ret. dms., t.c.l., same basis gal. .70 - —
tankcars, refy. gal. .49 - —
NF 80-90% vis., non-ret. dms., c.l., same basis gal. .66 - —
non-ret. dms., t.c.l., same basis gal. .71 - —
tankcars, refy. gal. .50 - —
Mineral oil, white, NF, 135-138 vis., non-ret. dms., c.l., same basis gal. .72 - —
Mineral oil, white, NF, 135-138 vis., non-ret. dms., t.c.l., same basis gal. .77 - —
tankcars, rfy. gal. .56 - —
Mineral oil, white, NF, 145-155 vis., 5 non-ret. dms., c.l., same basis gal. .78 - —
non-ret. dms., t.c.l., same basis gal. .83 - —
tankcars, refy. gal. .63 - —
Mineral oil, white, USP, 180-190 vis., non-ret. dms., c.l., same basis gal. .80½- —
non-ret. dms., t.c.l., same basis gal. .85½- —
tankcars, refy gal. .64½- —
Mineral oil, white, USP, 200-210 vis., non-ret. dms., c.l., f.o.b. refy gal. .82½- —
non-ret. dms. t.c.l. gal. .87½- —
tankcars, refy gal. .66½- —
Mineral oil, white, USP, 340-350 vis., non-ret. dms., c.l., f.o.b. refy gal. .87½- —
non-ret. dms., t.c.l. gal. 92½- —
tankcars, refy gal. 71½ —
(For f.o.b N. Y add 2c. for tankcars; 2c. for c.l., and 3c for t.c.l. non-ret. dms.).
Mineral orange, American, bbls., c.l., works lb. .16 - —
bbls., t.c.l., same basis lb. .17 - —
Mineral spirits, petroleum, odorless, tankcars, New Jersey gal. .29 - —
New York gal. .305 - —
Houston, Texas gal. .25 - —
regular, tankcars, New Jersey and New York gal. .18 - —
Group 3 gal. .12875- —
Houston, Texas gal. .145 - —
Mineral spirits, 140 F, flash, New York, New Jersey at terminal gal. .205 - —
Houston, Texas gal. .17 - —
Mink oil, dms lb. 2.75 - —
Mirbane oil (see Nitrobenzene).
MNPT maroon toner, kgs., c.l., works lo. 6.30 - —
Molasses, blackstrap, feed grade, tanks, New Orleans gal. .13 - .13¼
tanks, New York gal. .15 - .16
Molybdated orange, bbls. lb. .49 - —
Molybdenum metal, powd., 80 or 200 mesh, ctns., works kilo. 7.84 - —
325 mesh, ctns., works kilo. 9.13 - —
Molybdenum trioxide, purif., dms., works lb. 1.15 - —
Tech., chemical, dms., works, basis Mo content lb. 1.48 - —
Tech., metallurgical, dms., works, basis Mo. content lb. 1.47 - —
Molybdic acid, 85%, dms., works. lb. 1.05 1.15
Monoallylamine, dms., c.l., dlvd lb. .965 - —
dms., c.l., dlvd. lb. .995 - —
tanks, dlvd lb. .96 - —
Monobutylamine, dms., c.l., dlvd. E. of Rockies lb. .87½- —
dms., t.c.l., same basis lb. .59 - —
tanks, same basis lb. .55 - —
Mono-tert-butyl-m-cresol, dms., c.l., works lb. .55 - —
dms., t.c.l., works lb. .56 - —
tanks, works lb. .54 - —
Monochloracetic acid, purif. (see Chloroacetic acid, mono).
Monochlorobenzene, dms., c.l., frt. alld. or dlvd. E lb. .10½- —
dms., t.c.l., same basis lb. .11½- —
tanks, same basis lb. .08¾- —
Monochlorobenzene prices in the West 1¾c. higher.
Monoethanolamine, dms., c.l., dlvd. E lb. .27½- —
dms., t.c.l., same basis lb. .29 - —
tanks, same basis lb. .25 - —
Monoethynylalphanaphthylamine (see n-Ethyl-a-naphthylamine).
Monoethylamine, 70% aqueous, solution, dms., c.l., dlvd. E, 100% basis lb. .38½- —
dms., t.c.l., dlvd. E., 100% basis. lb. .40 - —
tanks, dlvd. E., 100% basis lb. .35 - —
Monoethylaniline (see N-Ethylaniline).
Monoethylorthotoluidine (see N-Ethyl-o-toluidine)
Monoisopropanolamine, dms., c.l., dlvd. E lb. .27½- —
dms., t.c.l., same basis lb. .29 - —
tanks, same basis lb. .25 - —
Monoisopropylamine, anhyd., dms., c.l., dlvd lb. .33½- —
dms., t.c.l., same basis lb. .35 - —
tanks, same basis lb. .31 - —
Monomethylamine, anhyd., cyls., t.c.l., frt. equald., 100% basis lb. .30 - —
tanks, 100% basis lb. .26 - —
30-35% soln., dms., c.l., frt. equald., 100% basis lb. .36 - —
Monomethylamine, 30-35% soln., dms., t.c.l., frt equald, 100% basis lb. .36½- —
tanks, frt. equald. 100% basis. lb. .26 - —
40% soln., dms. frt. equald., 100% basis lb. .33 - —
dms., t.c.l., frt. equald. 100% basis lb. .33½- —
tanks, frt. equald, 100% basis. lb. .26 - —
Monopentaerythritol, tech., bgs., c.l., dlvd. E lb. .31 - —
bgs., t.c.l., dlvd. E lb. .32 - —
Monopotassium glutamate, dms., 1,000-lb lots, frt alld lb 3.05 - —
dms. 100-lb lots, same basis lb 3.25 - —
Monosodium glutamate, dms., dlvd. lb. 1.07 - 1.15
Monosodium phosphate (see sodium phosphate, monobasic).
Montan wax, Calif., refd., bgs lb. .27 - .28
Imp., crude, Bohemian, bgs lb. .25 - .26
German, bgs. lb. .25 - .26
Morphine, cns., 100-oz., f.o.b. works oz. 12.35 - —
Morphine hydrobromide, cns., 100-oz., f.o.b. works oz. 9.90 - —
Morphine hydrochloride, NF, cns., 100-oz., f.o.b. works oz. 9.90 - —
Morphine sulfate, USP, cns., 100-oz., f.o.b works oz. 9.90 - —
Morpholine, dms., c.l., dlvd. E lb. .55¼- —
dms., t.c.l., dlvd. E lb. .56¾- —
tanks, dlvd E lb. .52¾- —
Muriatic acid (see Hydrochloric acid).
Musk, syn., ambrette, fib. dms., 100-lb lots lb 4.40 4.90
cns., 25-lb lots lb 4.50 5.00
Ketone fib. dms., 100-lb. lots lb 4.60 5.10
cns., 25-lb lots lb 4.70 5.20
Xylol, fib. dms., 100-lb lots lb 1.26 - —
cns. 25-lb lots lb 1.40 - —
Mustard seed, Danish, yellow, bgs. lb. .10 - —
Montana, yellow, bgs lb. .10½- —
Oriental, bgs. lb. .09 - —
Mustard oil, syn., bots. lb. 1.60 1.85
Myristic acid, bgs lb. .23¼- .25¾
tanks lb. .22¼- —
Myrrh gum, cs lb. .65 .75

N

Naphtha, high solvency (see Solvent naphtha, petroleum).
Naphtha, petroleum, cleaner's (see Cleaner's naphtha).
Naphtha, VM&P, petroleum, tankcars, New Jersey and New York gal. .19 - —
Group 3 gal. .13875- —
Houston, Texas gal. .155 - —
Naphthalene, crude, dom., 78°, tanks, frt. equald lb. .06¼- .07
imp., 78°, bgs., large lots lb. .09½ Nom.
Refd., indust, chipped, crushed, bgs., frt. equald lb. .13½- —
tanks, same basis lb. .10¾- —
Naphthalene, refd., indust., balls, flakes, wholesalers, jobbers, bbls., c.l., same basis, lb. .15½- —
cs., 50 lbs., c.l., same basis, lb. .15¾- —
1-lb pkgs., c.l., same basis, lb. .18½- —
a-Naphthol, dms., frt. alld lb. 1.02 - —
b-Naphthol, tech., flake bbls., c.l., works lb. .34 - —
bbls., t.c.l., works lb. .36 - —
Naphthol ITR, red toner, bbls., works lb 5.00 - —
1-Naphthol-3,6-disulfonic 8-amino acid (see H acid)
1-Naphthol-4 sulfonic acid (see Nevile and Winther's acid)
1-Naphthol-5-sulfonic acid (see L acid)
1-Naphthol-5-sulfonic 8-amino acid (see S acid)
2-Naphthol-6,8-disulfonic acid (see Gamma acid).
Naphthol sulfonic mixed acid (see Cleve's acid)
a-Naphthylamine, dms., frt. alld lb. .59 - —
b-Naphthylamine, tech., flake, bbls., works lb. 1.60 - —
1-Naphthylamine-5-sulfonic acid (see Laurent's acid)
2-Naphthylamine-4,8-disulfonic acid (see Cassella acid).
2-Naphthylamine-1-sulfonic acid (see Tobias acid).
2-Naphthylamine-6-sulfonic acid (see Broenner's acid)
2-Naphthylamine-7-sulfonic acid (see F acid)
Naringin, fib dms. lb. 8.50 —
Neatsfoot oil, 13° cold test, dms lb. .29 Nom.
20° cold test, dms. lb. .28 Nom.
30° cold test, dms. lb. .27 Nom.
Neocinchophen, USP, dms., frt. adjusted lb. 7.00 8.00
Neomycin sulfate, fib dms., 1-kilo basis activity gram. .25 - —
fib. dms. 100-999-gram lots, basis activity gram. .30 - —
Tech., fib dms gram. .13½- —
Neopentylglycol, dms., c.l., dlvd lb. .32 - —
dms. t.c.l. same basis lb. .33 - —
Nerol, dms. lb. 4.75 - —
Neroli oil, NF, French, bots. lb. 425.00 -575.00
Tunisian, bots. lb. 400.00 - —
Nerolin, cns. lb. 2.45 - 2.85
Neville and Winther's acid, dms., frt. alld lb. 1.40 - —
Niacinamide (see Nicotinamide).
Nickel acetate, bbls., dlvd. lb. .68½- .75½
Nickel carbonate, bbls., dlvd. lb. 78¼- .85¼
Nickel chloride, bbls., dlvd. lb. .37 - .45
Nickel formate, bbls., ton lots, frt. alld lb. .72 - .73
Nickel metal, electro cathodes, cs., works lb .74 - —
Nickel nitrate, dms., frt. alld. lb. .31½- .33½
Nickel oxide, black, bbls. lb. .85 - —
Green, bbls lb. .84 - —
Nickel sulfate, bgs., c.l., dlvd. lb. .28 - —
bgs., t.c.l., dlvd. lb. .28½- .36
Nicotinamide, USP, 50-kilo, dms., 100 kilos., dlvd kilo. 5.75 - 6.50
dms., less than 100 kilos, dlvd. kilo. 6.25 - 7.00
Nicotinamide hydrochloride, 50-kilo dms., dlvd. kilo. 6.50 - 7.50
Nicotine sulfate 40%, dealers, 50-lb. dms frt alld lb. 1.20 - —
40% manufacturers, 500-lb. dms., frt alld lb 1.05 - —
Nicotinic amide, USP (see Nicotinamide).
Niger seed, bgs. lb. .10¼- —
Nikethamide, cbys. lb. 5.00 - —
Nitric acid, 36° Be., cbys., c.l., works E 100 lbs. 5.75 - —
cbys., t.c.l., works E 100 lbs. 6.05 - 6.85
38° Be., cbys. c.l., works E. 100 lbs. 6.25 - —
cbys., t.c.l., works E 100 lbs. 6.55 - 7.35
40° Be., cbys. c.l., works E. 100 lbs. 6.75 - —
cbys., t.c.l., works E 100 lbs. 7.05 - 7.85
42° Be., cbys., c.l., works E. 100 lbs. 7.25 - —
cbys., t.c.l., works E 100 lbs. 7.55 - 8.35
58.5 to 68%, HNO_3, tanks, works, 100% basis 100 lbs. 3.90 - —
94½ to 95½% HNO_3, tanks, works, 100% basis 100 lbs. 4.90 - —
Nitric acid, CP, NF, consumer, cbys., extra, c.l., works lb. .18½- —
cbys. extra t.c.l. works. lb. .20 - —
5-pint bots. extra, cs., c.l., same basis lb. .22½- —
5-pint bots. extra, cs., t.c.l., same basis lb. .24 - .25
dms., frt alld lb. .99 - —
4-Nitro-2-aminophenol, tech., paste, dms., t.c.l., works lb. .64 - —
m-Nitroaniline, cryst., dms., frt. alld lb 1.15 - —
Paste, dms., frt. alld., 100% basis 1.10 - —
o-Nitroaniline, flaked, dms. t.l., frt. alld lb. .49 - —
dms. t.t.l., frt alld lb. .51 - —
o-Nitroaniline orange toner, kgs. lb. 1.50 - —
p-Nitroaniline, c.l., t.l., dms., 20,000 lb. min., dlvd lb. .44½- —
dms., t.c.l., same basis lb. .46½- —
o-Nitroanisole, tech., tanks, frt. alld, lb. .36 - —
p-Nitroanisole, tech., solid, dms., frt alld lb. .72 - —
Nitrobenzene, dbl dist., dms., c.l., frt. alld lb. .13 - —
dms., t.c.l., frt. alld. lb. .14 - —
tanks, frt. alld lb. .12 - —
p-Nitrobenzoic acid, dms., c.l., works lb. .63 - —
Nitrocellulose, ester-soluble, 30-35 cps., ¼ ½, ¾, 5-6, 15-20, 30-40, 60-80, 125-175 seconds, bbls., c.l., works lb. .37½- —
bbls., t.c.l., same basis lb. .33½- .40½
18-20, cps., bbls., c.l., same basis lb. .39½- —
bbls., t.c.l., same basis lb. .40½- .42½
250-400, 600-1,000 seconds, bbls., t.c.l., same basis lb. .43 - .46
Nitrocellulose, spirit soluble, 30-35 cps. ¼ ½ seconds, bbls., c.l., same basis lb. .43 - —
bbls., t.c.l., same basis lb. .44 - .46
5-6 cps., 40-60 seconds, bbls., c.l., same basis lb. .42 - —
bbls., t.c.l., same basis lb. .43 .45
Denatured alcohol used in the manufacture of nitrocellulose is charged extra. Drums extra but returnable
o-Nitrochlorobenzene, dms. c.l., frt. alld lb. .15 - —
dms., t.c.l., same basis lb. .16 - —
tanks, same basis lb. .13 - —
p-Nitrochlorobenzene, dms. lb. .26 - .27
2-Nitro-p-cresol, tech., dms., dlvd lb. .88 - —
Nitroethane, dms., c.l., dlvd. E lb. .25 - —
dms., t.c.l., dlvd E lb. .26½- —
tanks, dlvd E lb. .22½- —
Nitroethane prices West of Rockies are 1c. higher.
Nitrogen solutions, direct application, tanks, f.o.b. works unit-ton. 1.64 - —
Manufacturing type, same basis, unit-ton. 1.32 - —
Nitrogen tetroxide, indust., tankcars, f.o.b Hopewell, Va lb. .065 - —
Cyls., t.l., min 5 tons, same basis lb. .07½- —
Cyls., t.c.l., t.t.l., same basis lb. .15 - —
Nitrogenous process tankage, bulk, works unit-ton. 4.50 - 5.00
Nitrogenous sewage sludge, bulk, f.o.b Chicago, works. unit-ton. 3.50 - —
(The foregoing price is per unit NH_3, plus 50c, per unit a.p.a., bulk, f.o.b. producers' works, Chicago.)
Nitromethane, dms. t.l., dlvd. E lb. .25 - —
dms. t.t.l. dlvd E lb. .26½- —
Nitromethane prices West of Rockies are 1c higher
a-Nitronaphthalene, bbls., frt. alld. lb. .31 - —
o-Nitrophenol, dms., works, frt. equald lb. .94 - —
p-Nitrophenol, dms., c.l., frt. alld. lb. .45 - —
dms., t.c.l. frt. alld lb. .47 - —
1-Nitropropane, dms. c.l., frt. alld. E of Rockies lb. .23½- —
dms., t.c.l., same basis lb. .25 - —
tanks, same basis lb. .21 - —
2-Nitropropane, dms., c.l., frt. alld. E of Rockies lb. .18½- —
dms., t.c.l., same basis lb. .20 - —
tanks, same basis lb. .16 - —
Nitropropane prices West of Rockies are 1c. per lb higher.
m-Nitrotoluene, tech., dms., frt. alld. lb. .50 - —
o-Nitrotoluene, dms., c.l., frt. alld. lb .15 - —
dms., t.c.l., frt alld. lb. .16 - —
tanks, frt. alld. lb. .13 - —
p-Nitrotoluene, tech., cast, dms., c.l., works lb. .27½- —
dms., t.c.l., works lb. .28 - —
flake, dms., c.l., t.l., works lb. .27½- —
dms., t.c.l., works lb. .28 - —
m-Nitro-p-toluidine, dms. lb. 1.25 - —
Nonylphenol, dms., c.l, frt. alld. lb. .22½- —
dms., t.c.l., frt. alld lb. .23½- —
tanks, frt. alld lb. .20 - —
Nonylphenol prices on shipments to Western States are 2c. higher.
Nutmegs, East Indian, whole, bgs. lb. 1.18 - —
West Indian, bgs lb. 1.20 - —
Nutmeg oil, USP, dist., East Indian, ens lb. 9.00 -12.00
West Indian, ens. lb. 9.00 -12.00
Nux vomica, bls. lb. .20 - —
Powd., bbls., bxs. lb. .20 - .22

O

Ocher (see Iron oxide yellow, nat.).
Ocotea cymbarum oil, dms lb. .46 - .48
Octane, indust., tanks, Bayonne, N.J. gal. .20 - —
1-Octanol, tech., dms., c.l., dlvd., Zone 1 lb. .43½- —
dms., t.c.l., dlvd. Zone 1—lb. .45½- —
tanks, dlvd., Zone 1 lb. .41 - —
Octyl alcohol, perfumers grade, bots. lb. 1.60 - 3.25
Octyl alcohol, tecn. (see 1-Octanol, tech).
tert-Octylamine, dms., c.l., t.l., f.o.b. works lb. .54½- —
dms t.c.l. same basis lb .55 - —
Octylphenol, bgs., c.l., works lb. .22½- —
bgs., t.c.l., works lb. .23 - —
tanks, works lb .21½- —
Octylphenol in dms., 11c. higher.

OILS

Oil quotations are listed individually. For example, prices on Oil, coconut, may be found in the C's under Coconut oil.

Oiticica oil, liq., dms lb. .15¼- .15¾
tanks lb. .13¾- .14
Oleic acid, dbl.-dist. (white), dms. lb. .17½- .20
tanks lb. .15 - —
S. D., dms. lb. .16½- .19
tanks lb. .14 - —
Oleum (see Sulfuric acid, fuming).
Olibanum gum, siftings, cs lb. .15 .20
Tears, cs. lb. .22 .30
Olibanum oil, bots lb. 5.00 7.65
Extra fine, bots lb 8.00 9.50
Olive oil, edible, dms., spot, duty paid gal. 2.35 - 2.40
Olivine, crude, works ton 12.00 - —
20 mesh, works ton 15.00 - —
100 mesh works ton 20.00 - —
Opium, USP, cns., 25-lbs., f.o.b. works oz. 19.20 - —
gran., cns., 50 lbs., same basis oz. 21.65 - —
powd., cns., 50 lbs., same basis oz. 21.65 - —
Orange oil, expressed, USP, Calif., cns., dms lb. .70 - .90
Calif., sweet., cns., dms lb. .60 - —
Florida, cns., dms lb. .0 - .45
Messina, cns. lb. 3.25 5.00
West Indian, bitter, cns., dms., lb. 2.50 3.50
Orange peel, bitter, Haitian, bls lb. .18 .20
Sweet lb. .28 .30

ORANGE PIGMENTS

Orange pigment quotations are listed individually. For example, prices on Orange, chrome, may be found in the C's under Chrome orange.

Origanum oil, Spanish, cns lb. 1.80 2.30
Orris root, Florentine, bls lb. .55 - —
powd., bbls., bxs lb. .65 - —
Verona, bls lb. .35 - —
powd., bbls., bxs lb. .45 - —
Orthoanisidine (see o-Anisidine).
Orthochlorobenzaldehyde (see o-Chlorobenzaldehyde)
Orthochloroaniline (see o-Chloroaniline).
Orthochlorobenzoic acid (see o-Chlorobenzoic acid).
Orthochloroparanitroaniline (see 2-Chloro-4-nitroaniline).
Orthochlorophenol (see o-Chlorophenol).
Orthocresol (see o-Cresol).
Orthocresotinic acid (see 2,3-Creosotic acid).
Orthodichlorobenzene (see o-Dichlorobenzene).
Orthonitroaniline (see o-Nitroaniline).
Orthonitrochlorobenzene (see o-Nitrochlorobenzene).
Orthonitroparachlorophenol (see 2-Nitro-4-Chlorophenol).
Orthonitrophenol (see o-Nitrophenol).
Orthonitrotoluene (see o-Nitrotoluene).
Orthophenetidine (see o-Pheretidine)
Orthophenylphenol (see o-Phenyl phenol).
Ortho-tertiary amylphenol (see o-tert-Amylphenol).
Orthotolidine (see o-Tolidine base)
Orthotoluidine (see o-Toluidine)
Ouabain, USP, bots. gram. 3.00 4.00
Ouricury wax, crude, bgs lb. .53 - .55
Refd., pure, bgs lb. .58 - .60
Oxalic acid, bgs., c.l., works lb. .18 - —
bgs., 10,000-lb. lots, works lb. .19 - —
bgs., smaller lots, works lb. .20½- —
Oxalic acid in drums is priced ½c. per lb. higher.
b-Oxynaphthoic acid, pigment manufacture, dms., frt alld lb. .912 - —
Dyestuff manufacture, dms., same basis lb. 1.03 - 1.14
Oxyquinolin sulfate, cns., 100-lb. lots, works lb. 4.75 - 5.00
cns., smaller lots, works lb. 4.92 - 5.17

P

Palm oil, clarif., dms lb. .1400- .1500
tanks lb. .11¼- —
Palm oil acid, double dist., dms. lb. .15¼- .17¾
single dist., dms lb. .14¾- .17¼
tanks lb. .12¼- —
Palmarosa oil, cns lb. 4.90 - 6.00
Papain, powd. bots. lb. 5.50 -10.00
Papaverine hydrochloride, nat. or syn., USP, cns., 25-oz. to 100-oz. lots oz. 5.00 - —
cns., smaller lots oz. 5.05 - 5.20
Papaverine sulfate, nat. or syn., USP, cns oz. 7.10 - 7.35
Paprika, Bulgarian, bgs lb. .30 - —
Hungarian, bgs. lb. .31 - —
Spanish, bgs. lb. .30 - —
Yuogslavian, bgs. lb. .39 - —
Para-aminobenzoic acid (see p-Aminobenzoic acid).
Parachlorobenzoic acid (see p-Chlorobenzoic acid).
Paramethylphenylcinchonic acid (see Neocinchophen).
Paranitrobenzoic acid (see p-Nitrobenzoic acid).
Paratoluidinemetasulfonic acid (see p-Toluidine-m-sulfonic acid).
Para-aminophenol (see p-Aminophenol).
Parachlorophenol (see p-Chlorophenol).
Parachloro-orthonitroaniline (see 4-Chloro-2 nitroaniline).
Para-anisidin (see p-Ansidine)
Parachloraniline (see p-Chloraniline).
Parachlorobenzaldehyde (see p-Chlorobenzaldehyde).
Paracresol (see p-Cresol).
Paradibromobenzene (see p-Dibromobenzene).
Paradichlorobenzene (see p-Dichlorobenzene).
Para toner, red, bbls lb. 1.30 - —
Chlorinated, kgs. lb. 1.41 - —
Paraffin, crude, scale, white, 123°-127°F., ASTM, tanks, refy. lb. .0655- .0660

Paraffin, fully refd., 132°-134°F., ASTM, tanks, refy. lb. .0765- —
135°-137°F., ASTM, tanks, refy. lb. .0765- —
130°-132°F., ASTM, tanks, refy. lb. .0765- —
Paraffin, fully refd., 132°-134°F., ASTM, tanks, refy lb. .0765- —
135°-137°F., ASTM, tanks, refy. lb. .0763- —
AMP temperatures are an arbitrary 3°F. higher than ASTM
Paraffin oil, pale, 100-110 vis., at 100°F., tanks e a s t coast refy gal. .14 - —
Paraffin wax (see Paraffin)
Paraformaldehyde, 91%, flake, bgs., c.l., frt. alld lb. .10 - —
bgs., l.c.l., frt. alld lb. .12 - .13
91%, powd., bgs., c.l., ex whse. lb. .1713- —
bgs., l.c.l., ex whse lb. .1865- —
USP-X, fib. dms., c.l. lb. .19 - —
fib dms., 1,000-lb. lots lb. .20 - —
fib dms., smaller lots lb. .21½- —
Paraldehyde, tech., 98%, 55-gal. dms., t.l., dlvd. E lb. .14 - —
55-gal. dms., l.c.l., dlvd. E lb. .15½- —
tanks, dlvd. E lb. .11½- —
Paranitroaniline (see p-Nitroaniline).
Paranitrochlorobenzene (see p-Nitrochlorobenzene)
Paranitrotoluene (see p-Nitrotoluene).
Paranitrophenol (see p-Nitrophenol)
Paraphenetidine (see p-Phenetidine)
Paraphenylenediamine (see p-Phenylenediamine).
Paraphenylphenol (see p-Phenylphenol)
Para-tertiary-amylphenol (see p-tert-Amylphenol)
Para-tertiary butylphenol (see p-tert-Butylphenol)
Parathion ethyl dms. frt alld lb .84 —
Parathion prices 2c. per lb. higher in West.
Paratoluenesulfonamide (see p-Toluenesulfonamide)
Passion flower herb, bls lb .35 .40
Patchouli oil, imp., cns. lb. 5.60 6.50
Peach kernel oil USP (see Apricot kernel oil).
Peacock blue, fugitive, 100% color strength, 250-lb. bbls., dlvd E of Rockies lb. 1.00 —
Peacock blue price 1c higher W of Rockies.
Peanut meal, old process 45% bgs. f.o.b., mills ton.56.00 - —
solvent, same basis ton.53.50 - —
Peanut oil, crude, tanks, f.o.b. mill lb. .14 - —
Refd., dms. lb. .19¼- .19½
tanks lb. .17¼- —
Pecan, dom., NF, citrus, powd., 100 kilos, f.o.b. shipt, pt kilo. 4.52 - —
Pelargonic acid, dms., c.l., dlvd lb. .25 - —
ton lots, same basis lb. .27½- —
tanks, same basis lb. .23½- —
Penicillin, potassium, cryst., bulk, 1,000,000 units ....018 - —
Penicillin, procaine, cryst., bulk, 1,000,000 units. .020 - —
Pennyroyal oil USP imported, cns. lb 1.95 2.70
Pentachlorophenol, 50-lb. bgs., c.l., t.l., works, frt. equald lb. .21 - —
bgs., less than ton-lots, same basis, lb. .29 - —
bgs., c.l., t.l., 2,000 lb. minimum, same basis lb. .22½- —
Pentachlorophenol in dms 1c. higher
Pentaerythritol tech. bgs., c.l., dlvd lb .31 —
bgs. l.c.l., dlvd lb .32 —
Pentaerythritol, di and tri-isomers (see Dipentaerythritol and Tripentaerythritol).
Pentane indust. tanks, f.ex refy gal. .14 - —
Pentobarbital dms. 100 lbs. or more lb 6.00 - —
Pepper, black, Malabar, bgs. ....lb. .43 - —
Lampong, bgs. .....lb. .43 - —
Red Funtuas bgs .... lb. .32 - —
Japanese Hontoka, bgs. ... lb. .37½- —
Santaka, bgs lb. .31½- —
Sudanese, bgs. lb. .36 - —
White, Muntok, bgs lb. .74 - —
Peppermint leaves, dom., USP, bls., dms .lb No stocks.
imp., USP, dms. lb. .85 - .90
Peppermint oil, nat., dms lb. 4.90 - 5.25
Redist., USP, dms lb. 5.50 - —
Perchloroethylene dms., c.l., or t.l., dlvd lb. .13½- —
dms., l.c.l., dlvd. lb. .15¼- —
tanks, dlvd. lb. .11¼- —
tanktruck, 1,000 gal. min. dlvd lb .12¼- —
Peru acid, dry bbls., frt. alld lb. 1.60 - —
Paste, bbls. frt. alld lb. 1.55 - —
Peru balsam, dms lb. 1.15 - 1.50
Persic oil, USP (see Apricot kernel oil).
Petitgrain oil, South American, ens., dms lb. 2.30 - —
Petrolatum, cream, dms., c.l., refy. lb. .08125- —
dms., l.c.l., dlvd. lb. .10125-.11375
tanks, refy. lb. .05875- —
Extra amber, dms., c.l., refy lb. .09125- —
dms., l.c.l., dlvd. lb. .09125-.10375
tanks, refy. lb. .04875- —
Petrolatum, lily white, dms., c.l., refy lb. .08625- —
dms., l.c.l., dlvd. lb. .10625- .12
tanks, refy. lb. .06735- —
Petrolatum, USP, snow white, dms., c.l., refy lb. .09125- —
dms., l.c.l. dlvd lb. .11125- .125
tanks, refy. lb. .06875- —
Petrolatum, USP, soft yellow, dms., c.l., refy lb .07125- —
dms., l.c.l., dlvd. lb .095 .10375
tanks, refy lb 04875- —
Petroleum pitch (see Asphalt, petroleum)

PETROLEUM PRODUCTS
Petroleum product quotations are listed individually. For example, prices on Petroleum, mineral spirits, may be found in the M's under Mineral spirits, petroleum

Petroleum sulfonate, oil soluble, 60-62% sulfonic content, non-ret dms., c.l. works. lb. .16½- .18¾
non-ret. dms., l.c.l., works lb .17½- .19
tanks, works lb. .14½- .17
50-55% sulfuric content, non-ret. dms., c.l., works lb. .16 - —
non-ret. dms., l.c.l., works lb .17 - —
tanks, works lb .13 - —
o-Phenetidine dms., c.l., frt. alld. E lb .91 - —
dms. l.c.l., same basis lb .93 - —
p-Phenetidine, dms., c.l., frt. alld lb 1.05 - —
dms. same basis lb 1.08 - —
Phenobarbitol, USP, dms., 100-lbs., frt. alld lb. 3.25 - —
Phenobarbital-Sodium (see sodium phenobarbital).
Phenol, 90-92% (cresol 8-10%), non-ret dms., frt. alld E of Rockies lb. .17¾- —
non-ret. dms. l.c.l., same basis. lb. .18¾- —
tanks, same basis lb. .15¾- —
Phenol, 82-84% (cresol 16-18%) non-ret. dms., c.l., same basis. lb. .17½- —
non-ret dms., l.c.l., same basis. lb. .18½- —
tanks, same basis..... lb. .15½- —

Phenol, 29°C., or above, tar dist., non-ret. dms., c.l., same basis. lb. .19 - —
39°C., or above, tar dist., non-ret. dms., l.c.l. lb. .20 - —
tanks, same basis lb. .17 - —
USP, syn., dms., c.l., t.l., frt. alld lb. .19½- —
dms., l.c.l., same basis lb. .21½- —
tanks, same basis lb. .17½- —
Phenolphthalein, USP or yellow, 250-lb. dm., 2,000 lbs., frt. alld lb. 1.30 - —
250-lb. dm., same basis lb. 1.35 - —
Phenothiazine drench, fib. dms., t.l., dlvd lb. .46 - —
fib. dms., ton lots, dlvd lb. .49 - —
NF, fib. dms., t.l., dlvd lb. .45 - —
fib. dms., ton lots, dlvd lb. .48 - —
Phenyl acetate, dms., 100-lb. lots, works lb. .50 - —
Phenyl salicylate (see Salol)
Phenylacetaldehyde, soln., 50%, bots lb. 2.15 - 2.35
100%, bots. lb. 3.80 - 4.00
Phenylacetic acid, pure, cryst., cns lb. 1.25 - 1.75
di-Phenylalanine, dms., 1-kilo kilo.65.00 - —
l-Phenyl-3-carbethoxy pyrazolone-5, fib dms., 200-lb lots, dlvd. E lb. 3.43 - —
fib dms., smaller lots, dlvd. E lb. 3.80 - —
N-Phenyldiethanolamine, dms., c.l., dlvd. E lb. .50 - —
dms., l.c.l., dlvd. E lb. .51½- —
tanks, dlvd. E lb. .47½- —
m-Phenylenediamine, dms., c.l., t.l., frt. alld lb. 1.08 - —
t.c.l., l.t.l., same basis lb. 1.10 - —
o-Phenylenediamine, comt, fib. dms, 100 to 1,000 lbs., works. lb. 1.70 - 1.80
p-Phenylenediamine, tech., dms, works lb. 1.55 —
Phenylethanolamine, dms., c.l., works lb. .75½- —
dms., l.c.l., same basis lb. .76¼- —
Phenylethyl acetate bots. lb. 1.25 1.40
2-Phenylethyl alcohol, extra, dms. lb. 1.14 1.50
Standard, dms lb. 1.10 1.60
b-Phenylethylamine dms., 20,000 lbs. or more, frt. alld lb. 1.50 —
dms. smaller lots, frt. alld lb. 1.70 1.85
Phenylethylphenyl acetate, bots lb 4.00 4.25
Phenylglyconic acid (see Mendelic acid).
Phenylhydrazine 97%, 450-lb dms. lb 1.45 - —
1-Phenyl-3-methyl pyrazolone-5, fib. dms., 250-lb. lots, dlvd E. lb 1.80 - —
fib dms. smaller lots, dlvd E lb 2.10 - —
o-Phenylphenol dms. l.c.l. works. lb. .48 - .50
p-Phenylphenol, bgs., c.l., works lb. .38½- —
bgs., l.c.l., works lb. .43 - —
Philippine copal gum, pale, chips, bgs lb. .23¾ .26
nubs, bgs. lb. .33¼ .37
seeds, bgs. lb. .20 Nom.
sorts, bgs. lb. .20 .24
Phloroglucinol, comi., fib dms., works lb 6.40 - —
CP, bots., works lb. 17 75 - —
Tech., fib dms works lb 10.45 - —
Phloxin red toner (see Eosin red toner)
Phosgene, ref. cyls. works lb 15½- —
Phosphate, defluorinated (see under D)
Phosphate rock, Curacao, Atlantic ports, New Orleans ton.46.50 - —
Phosphate rock, Florida, land pebble, run-of-mine, washed, dried, unground, 66-68%, b.p.l., bulk, c.l., mines, short-ton. 4.989 5.398
68-70%, b.p.l., bulk, c.l., same basis short-ton. 5.849 5.858
70-72%, b.p.l., bulk, c.l., same basis short-ton. 6.429 6.438
Phosphate rock, Florida, land pebble, run of mine, washed, dried, unground, 74-75%, b.p.l., bulk, c.l., same basis, short ton. 7.329 - 7.338
76-77%, b.p.l., c.l., bulk, same basis short-ton. 8.219 8.228
Above Florida prices are based on fuel oil at 2.52 per bbl. and labor at $1.64
Phosphoric acid, food grade, 75%, chys. c.l., works, E., frt. equald 100 lbs. 7.00 - —
chys. t.c.l., same basis 100 lbs. 7.25 - 7.75
tanks, t.w., works 100 lbs. 5.60 - —
80% chys., c.l. frt equald 100 lbs. 7.85 —
chys., t.c.l., works 100 lbs. 8.10 - 9.35
tanks, t.w., works 100 lbs. 6.00 - —
NF 85%, chys., c.l., works. 100 lbs. 8.50 —
chys., t.c.l., works 100 lbs. 8.75 - 9.00
tanks, t.w., works 100 lbs. 6.65 —
Phosphorus, amorph., red, dms., t.l., works lb. .55 - —
dms., smaller lots, works lb. .56 - .57
white (yellow), solid, dms., c.l., works, frt. equald lb. .20 .20½
dms. t.c.l. works, frt. equald lb. .21½- —
tanks, works, frt equald lb. .19 - —
Phosphorus oxychloride, dms., c.l., works lb. .14 - —
dms., t.c.l., works lb. .15 - —
tanks, works frt. equald lb. .12½- —
Phosphorus pentasulfide, powd., dms., c.l., works lb. .13½- —
dms. t.c.l. works lb. .14½- .15½
Solid, dms., c.l. works lb. .11½- —
dms. t.c.l. works lb. .12½- .13½
Phosphorus pentoxide, dms., c.l., works lb. .1375- .1475
dms. t.c.l. works lb. .1475- .1675
Phosphorus sesquisulfide, dms., cs., c.l., works lb. .38 —
dms. t.c.l. works lb. .39 .40
Phosphorus trichloride, dms., c.l., works lb. .14 —
dms., t.c.l., works lb. .15 - —
tanks, works lb. .12½- —
Phthalic anhydride bgs, c.l., works, frt. equald lb. .20 - —
bgs., l.c.l., same basis lb. .21 - —
tanks, same basis lb. .19½- —
Phthalimide 97-98%, dms., frt. alld lb. .65 - —
Phthalocyanine blue, full strength, bbls. dlvd E of Rockies. lb 2.90 - —
Resinated bbls. same basis lb 2.75 - —
Water dispersable, bbls., same basis lb 1.52 —
Phthalocyanine blue prices 1c. higher W of Rockies
Phthalocyanine green toner, bbls., works lb 3.35 —
Resinated, bbls. lb 3.00 —
Water dispersable, bbls. lb 1.71 —
Phthalocyanine green prices 1c higher W of Rockies
Phthalylsulfacetamide, fib. dms., 1,000-lb lots or more lb 5.00 —
NF, fib dms lb 5.20 —
a-Picoline, dms. c.l. works, frt. equald lb. .46 .48
dms., t.c.l., works, frt equald lb .46½ .49
tanks, same basis lb. .43 .46
b-Picoline, 98% dms., t.l., works lb. 1.05 —
dms., t.c.l. same basis lb. 1.15 —
tanks same basis lb. .95 —
b,g-Picoline, 5°C. dms., c.l., works. lb. .32½- —
dms., t.c.l., works..... lb. .33 - —

g-Picoline, dms., f.o.b., works lb. 1.60 - —
tanks, t.l., same basis lb. 1.50 - —
Picric acid, NF, bbls. lb. .85 - —
Tech., bbls. lb. .44 - —
Pigment green B, kgs lb. 1.55 - —
Pilocarpine hydrochloride, USP, bots oz. 4.75 - 5.25
Pilocarpine nitrate, USP, bots., vials, oz. 4.65 - 5.15
Pimento, Jamaican, bgs lb. .68¾- —
Mexican, bgs. lb. .56 - —
Pimento berry oil, NF, dms. lb. 3.75 9.25
Pimento leaf oil, crude, cns lb. 2.50 - 2.60
Pine oil, dest.-dist., dms., t.c.l. works lb. .18 - —
dms., t.c.l. ex whse. New York. lb. .173 - —
Steam-dist., dms., ex whse., New York lb. .183 - —
dms., dlvd lb. .188 - —
Pineneedle oil, Siberian (see Abies Siberica oil).
Pink root, bls. lb. 2.25 - —
Piperazine anhyd., dms. c.l., frt. alld. E lb. 1.80 - —
dms., l.c.l., frt. alld. E lb. 1.85 - —
Piperazine citrate, 36%, dms., 1,000 lbs or more, frt. alld lb. 1.15 - —
Piperazine dihydrochloride, 51%, dms., 1,000 lbs or more, frt alld lb. 1.23 - —
Piperazine hexahydrate, 44%, dms., 1,000 lbs or more, frt. alld lb. .86 - —
dms., 200-900 lbs., frt. alld lb. .89 - —
Piperazine phosphate, 42%, dms., 1,000 lbs or more, frt. alld lb. 1.06 - —
Piperidine, dist., 98% min., 5 dms. or more, l.c.l., t.t.l., f.o.b. works lb. 2.65 - —
1-4 dms., same basis lb. 2.70 - —
dms., c.l., t.l., frt. equald lb. 2.55 - —
Piperonyl butoxide dms. dlvd E lb. 4.50 5.03

PITCHES
Pitch quotations are listed individually. For example, prices on Pitch, soybean, may be found in the S's under Soybean pitch.

Platinum metal, works oz.81.00 -85.00
Pleurisy root, bls. lb. .45 .50
Podophyllum resin, NF, dms. lb.12.50 -15.50
Poke root, bls. lb. .19 .22
Polymyxin, bots., bulk, 50 billion units or more 1,000,000 units. .52 - —
bulk, bots., 25-50 billion units, 1,000,000 units. .54 - —
bulk, bots., 1-25 billion units, 1,000,000 units. .56 - —
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works lb. .42 - —
dms., 10,000-20,000-lb. lots, works. lb. .44 - —
dms. smaller lots, works lb. .47 - .49
Polyoxyethylene sorbitan tristearate, dms., 20,000-lb lots, works lb. .42 - —
dms., 10,000-20,000-lb lots, works lb. .44 - —
dms., smaller lots, works lb. .47 - .49
Pontianak copal gum, chips, bgs. lb. .23½- .26
Nubs, bgs. lb. .38 - .44
Poppy seed, Argentine, bgs. lb. No stocks.
Dutch, bgs. lb. .14 - —
Danish, bgs. lb. .14 - —
Polish, bgs. lb. .13 - —
Turkish, bgs. lb. .11 - —
Potash, caustic, liq., 45% basis, dms., c.l., works 100 lbs 4.25 - —
dms., l.c.l., same basis. 100 lbs. 5.25 - —
tanks, same basis 100 lbs. 3.70 - —
reg., flake, 88-92% dms., c.l., same basis 100 lbs. 9.53 - —
Potash, reg., flake, 88-92%, dms., l.c.l., same basis 100 lbs. 11.05 - —
solid, 88-92% dms., c.l., works 100 lbs. 9.10 - —
dms. t.c.l., works 100 lbs. 10.60 - —
Potassium acetate, NF, 200-lb dm., f.o.b works, E lb. .31 - —
Potassium bicarbonate, USP, gran. dms lb. .22 - —
powd., dms lb. .24 - —
Potassium bichromate, gran., bgs., c.l., t.l., works lb. .18 - —
bgs., l.c.l., works lb. .18½ .19¼
Potassium bichromate in dms ¾c. higher.
Potassium bitartrate, NF, gran., powd., 100-lb bgs., c.l., frt. equald lb. .37 - —
100-lb bgs., 5,000 lbs. 1 shipt., same basis lb. .38 - —
100-lb. bgs. smaller lots, same basis lb. .40 - —
Potassium borohydride, powd., dms., works lb.16.00 -22.00
Pelletized potassium borohydride $1.25 per lb. higher in 1,000-lb lots
Potassium bromate, 200-lb. dms., c.l., frt. alld lb. .49 - —
Potassium bromide, USP gran., bbls., kgs lb. .39 .40
Potassium carbonate, dom., NF, gran. bbls., dms lb. .20 - —
Dom. tech. powd., bbls., dms lb .21 .22
Dom., calcinated, bgs., c.l. works. 100 lbs. 8.50 - —
bgs., l.c.l., same basis 100 lbs. 9.55 - —
Dom. hydrated, 83-85%, bgs., c.l., works 100 lbs. 7.10 - —
bgs. l.c.l. works 100 lbs. 8.15 - —
Potassium chlorate, cryst. dms., c.l., works lb. .12¼- —
dms., l.c.l., works lb. .13½- .14½
Powd., dms., c.l., works lb. .12¾- —
dms. l.c.l., works lb. .14 - .15
works lb. .12¼- —
Potassium chlorate, NF, cryst., dms. 2,000 lbs or more, works lb. .16¾- —
NF, gran., 25-lb metal dms lb. .36 —
NF powd., dms., 2,000 lbs. or more, works lb. .17¼- —
Potassium chloride, indust., 99.9% KCL, bulk, c.l., works ton.29.00 - —
bgs., c.l., works ton. .00 - —
99.3% KCL, bulk, c.l., works. ton.28.00 - —
bgs., c.l., works lb.33.00 - —
USP, cryst, dms. lb .20 .22
USP, gran, dms. lb .21 .23
USP, powd, dms. lb .24 .26
Potassium chloride agricultural (see Potassium muriate)
Potassium chromate, tech., dms., works lb. .50 - .51
Potassium citrate, NF, gran., 250-lb. dms., f.o.b. works E lb. .43 - —
powd., 250-lb dms. same basis, lb. .46 - —
Potassium cyanide, dms. 20,000-lb lots or more works lb. 42½- —
dms. 2,000 19,999-lb lots, works, lb. .43 —
dms. smaller lots, works lb. .44 .44½
Potassium dichromate (see Potassium bichromate)
Potassium ferricyanide, dms., ton lots, works lb. .50 - —
dms., smaller lots works lb. .65 - —
Potassium ferrocyanide, dms., ton lots lb. .24½- —
dms. smaller lots lb. .29 - —

Potassium fluoborate, fib. dms., c.l., works lb. .30 - —
fib. dms., l.c.l., works lb. .31 - —
Potassium fluoride, dms., works lb. .36 - .37
Potassium gluconate, 100-lb. dm., f.o.b. works E lb. 1.67 - —
Potassium guaiacol sulfonate, NF, dms lb. 2.10 2.30
Potassium hydroxide, tech. (see Potash caustic).
Potassium hydroxide, USP, pellets, 100-lb dms. 1 to 100-dm. lots lb. .33½- .38
Potassium hypophosphite, NF, fib. dms., 1,000-lb. lots lb. 1.38 - —
Potassium iodide, USP cryst., gran., dms., 500-lb., f.o.b. works. lb. 1.53 - —
Potassium manure salt, min. 20% K_2O, bulk, c.l., works. unit-ton. .17 - .1765
Potassium metabisulfite, gran. dms., lb. .16 - —
Powd., dms lb. .27 - —
Potassium muriate, standard, bulk, c.l., works unit-ton. .37½- .39½
bagged 60% minimum K_2O, same basis ton.25.60- .27.80
Gran., bulk, c.l., works unit-ton. .38½- .40½
bagged, 60% minimum K_2O, same basis ton.28.10 -30.10
Inside prices apply to material contracted for prior to July 1, 1960.
Outside prices apply to material contracted for after that date but also for delivery during the current month
Potassium nitrate, NF cryst., bbls., 20-ton lots 100 lbs.17.00 —
bbls., smaller lots 100 lbs.18.00 19.00
gran., bgs., 20-ton lots 100 lbs. 9.50 —
bgs., smaller lots 100 lbs.11.00 12.00
powd., bgs., 20-ton lots 100 lbs.10.50 —
bgs., smaller lots 100 lbs.12.00 13.00
Potassium oxalate, neutral, tech., fine gran., powd., 300-lb. dm. f.o.b works E lb .32 —
Potassium pentaborate, gran. dms., c.l. works ton.219.50 —
dms., ton lots, ex whse 100 lbs.17.48 - —
dms., smaller lots, ex whse 100 lbs.18.73 - —
Powdered potassium pentaborate $10 per ton higher.
Potassium perchlorate, dms., c.l., works lb. .18½ —
dms. l.c.l. works lb. .19 .20
Potassium permanganate, comi., kgs. works lb. .25 .33
USP, dms., works lb. .29 .35
Potassium persulfate, dms., c.l., works lb. .17½ —
dms. l.c.l., works lb. .18 .21
Potassium pyrophosphate, tetrabasic, dms., works lb. .1475- 1575
Potassium prussiate red (see Potassium ferrocyanide)
Potassium prussiate yellow (see Potassium ferro-cyanide).
Potassium silicate, electrical grade, 30° Be. 1.2.0, dms., c.l., works 100 lbs. 6.50 —
dms., t.c.l., 5 dm. lots or more, works 100 lbs 7.25 7.65
tanks, works 100 lbs. 6.15 —
Potassium silicate electrical grade, 40.5° Be. 1:2.1, dms., c.l., works 100 lbs 5.95 —
dms. t.c.l. 5 dm. lots or more, works 100 lbs 6.70 —
tanks works 100 lbs 5.60 —
Potassium silicate, glass grade, bgs., c.l., works 100 lbs.17.30 -18.00
bgs. t.c.l works 100 lbs.17.80 —
Soln., 29° Be 1:2.5, dms., c.l., works 100 lbs. 4.95 —
dms. t.c.l., 5-dm lots or more, works 100 lbs 5.70 —
tanks, works 100 lbs 4.60 —
Potassium silicofluoride, bgs. works lb .09½ 10
Potassium silicofluoride in drums, 0.4c per lb higher
Potassium stannate, dms. frt alld. E lb. .776 .848
Potassium sulfate, min 50% K_2O, agricultural, bulk, c.l., works unit-ton. .70½- .72½
Inside price applies to tonnage contracted for prior to July 1, 1960
Outside price applies to tonnage contracted for after that date but also for delivery during the current month
Potassium sulfate NF VII, cryst., dms., lb 31 33
NF VII, gran. 400-lb. dm lb. .28 —
NF VII, powd. 400-lb dm lb. .17 —
Potassium sulfocyanate, NF, cryst., (see Potassium thiocyanate)
Potassium thiocyanate, NF, cryst., dms., works lb. .96 98
Tech., dms. works lb. 77 79
Potassium titanate, ctns. c.l., works lb. 16¼ —
ctns. 5-ton lots, works lb. .16½ —
ctns., 1-ton lots or less, works lb. .16¾ —
Potassium-magnesium sulfate, basis 40% K_2SO_4 and 18% MgO, bulk works, base price. ton.13.45 - —
bulk, works July forward ton.14.00 - —
Potassium-sodium tartrate, NF gran or powd., 250-lb dms., c.l., works E lb. 42½- —
250-lb dms. 5,000-lb. lots, same basis lb. .43 —
250-lb dms. same basis lb. .43½- —
Potassium-titanium fluoride, fib. dms., works lb .39 40
Potassium-zirconium flouride, fib. dms. c.l., works lb. .50 —
fib dms. t.c.l. works lb .52½ 55
Pregnenolone, bots gram No prices.
Pregnenolone acetate, bots gram No prices.
Procaine hydrochloride, USP, antibiotic grade, dms., 2,000-lb lots, frt alld lb 2.25 —
Procaine hydrochloride, USP, ampule grade, dms., 1,000-lb. lots, frt. alld lb 2.40 —
dms. 500 lbs lb 2.45 —
dms. 100 lbs lb 2.50 —
Progesterone, USP, bots gram No prices.
Pregnenolone acetate, bots gram No prices.
Propenyl guaethol, dms lb 24.30 27.00
b-Propriolactone, tech., dms., c.l., f.o.b. works lb .47½ —
dms., t.c.l., t.t.l., same basis lb. .48½ —
tanks, same basis lb. .45 —
Propionic acid, syn. pure, dms. c.l. dlvd lb. 23¼ —
dms., t.c.l., dlvd. lb. 24¾ —
tanks, dlvd. lb. 20¾ —
n-Propyl acetate, dms., c.l., dlvd lb. 14¾ —
dms., t.c.l., dlvd lb. 16¼ —
tanks, dlvd lb. 12¼ —
n-Propyl alcohol, dms. c.l., dlvd lb .14 15
dms., t.c.l., dlvd lb .15½ 16½
tanks, dlvd lb .11½ 12½

n-Propyl gallate, dms., 100 to 2,000-lb lots, works lb 3.90 - 4.40
n-Propyl-p-hydroxbenzoate, USP, dms lb. 2.30 2.40
Propyl thiouracil bots., 50 kilo lots or more kilo.55.00 —
bots., smaller lots kilo 55.10 -55.30
n-Propylamine dms., c.l., dlvd lb 1.24 —
dms., l.c.l. same basis lb. 1.255 —
n-Propylene dichloride consumers', dms., c.l. dlvd. E lb. .0845- —
dms., l.c.l., same basis lb. .0995- —
tanks same basis lb. 07 —
Propylene dichloride prices in West 1c. higher, same basis
Propylene glycol, indust., dms., c.l., dlvd. E lb. .15 - —
dms., l.c.l., same basis lb. .16¾- —
tanks, same basis lb. .12½- —
USP, dms., c.l., dlvd. E lb. .17 - —
dms., l.c.l., same basis lb. .18¾- —
tanks, same basis lb. .14½- —
Propylene glycol methyl ether, dms., c.l., dlvd lb. .20 - —
dms., l.c.l., same basis lb. .21 - —
tanks, same basis lb. .18½- —
Propylene oxide, dms., c.l., dlvd. E, lb. .17 - —
dms., l.c.l., dlvd. E lb. .18½- —
tanks, dlvd. E lb. .14½- —
Psyllium seed, black, bgs lb. .38 - .40
Blonde, bgs. lb. .18 - .20
Husks, bgs. lb. .43 - .45

Pumice, dom., grd., coarse to fine, 0, ¼, 1, 1½, 2, 3, bgs., ton lots lb. .03¾- .04¼
bgs., smaller lots lb. .03⅞- —
Imp., Italian, silk-screen, coarse, bgs. ton lots lb. .06½- —
fine, bgs., ton lots lb. .04 - —
sun dried, coarse, bgs ton.60.00 —
fine, bgs. ton.60.00 -70.00
Pumpkin seed, bgs lb. .25 - .26
Pyrethrins, syn. (see Allethrin).
Pyrethrum flowers, fine grd. 0.9% pyrethrins, bgs., ton, works lb. .50 - —
Powd., 1.3% pyrethrins, bgs., ton, works lb. .71 - —
Pyrethrum liquid, 20:1 basis (2 grams pyrethrins per 100cc odorless base), dms., works gal. 9.60 - 9.80
Pyrethrum liquid, 100:1 basis (10 grams pyrethrine per 100cc odorless base), dms., works gal.45.90 -46.90
Pyrethrum oleoresin, dewaxed, 20%, dms., works lb.11.00 -11.35
purif, 20%, dms., works lb.11.00 -11.35
Pyridine, denat., dms., c.l., works and frt. equald gal. 2.77 - —
dms., l.c.l., same basis gal. 2.80 - —
Refd., 2°, non-ret. dms., c.l., same basis lb. .75½- —
dms., l.c.l., same basis lb. .76 - .76½
tanks, same basis lb. .71 - —
Pyridoxine hydrochloride, USP, 500-gram bots., dms., f.o.b. works kilo.95.00 -100.00

Pyrites, Canadian, 48-50% S, mines, long-ton. 4.50 - 5.00
Pyrocatechol (see Catechol).
Pyrogallic acid, NF (see Pyrogallol).
Pyrogallic acid, tech., bbls., 100-lbs., f.o.b., works lb. 3.50 - —
Pyrogallol, NF, 100-lb. dms. lb. 3.50 - —
Pyroxylin, USP, bots. lb. 9.50 - —

Q

Quassia chips lb. .10 - —
Quicksilver (see Mercury metal).
Quince seed, bgs lb. 1.75 - —
Quinidine sulfate, USP, 1,000-oz. dm oz. .74½- —
Quinine, NF, 1,000-oz. dm. oz. .3750- —
Quinine bisulfate USP, 1,000-oz. dm. oz. .28 - —
Quinine hydrochloride, 1,000-oz. dm. oz. .3650- —
Quinine sulfate, USP, 1,000-oz. dm. oz. .3150- —
Quinoline, dms., c.l., frt. equald. lb. .50¾- —
dms., l.c.l., same basis lb. .51¼- —
tanks, same basis lb. .50 - —

R

R salt paste, dms., frt. alld., 100% basis lb. .98 - —
Powd. frt. alld, 100% basis lb. 1.08 - —
Rapeseed oil, dms. lb. .16¼- .16½
tanks lb. .14½- —
Rare earth oxalate, NF, 45-50%, bgs, works lb. 1.15 - —
Rauwolfia serpentina root, powd., bbls., dms lb. 1.00 - 1.20
Red carmine, No. 40 (see Carmine).
Red oil (see Oleic acid).

RED PIGMENTS

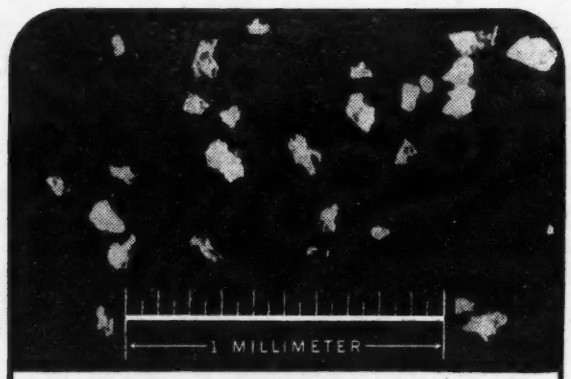
Red pigment quotations are listed individually. For example, prices on Red, lithol toner, may be found in the L's under Lithol red toner.

Red precipitate (see Mercuric oxide, red).
Red toner, Lake C, alizanine, bbls., works lb. 1.30 - —
Reserpine, cryst. bots gram. 1.25 - —
Resorcinol, tech. grade, bgs., c.l., works, frt. equald lb. .77½- —
bgs., l.c.l., same basis lb. .78½- —
Resorcinol in dms., 1c. per lb. more.
USP, powd., dms., works lb. 2.95 - —
Resorcinol monoacetate, NF, dms. lb. 2.50 - —
Rhatany root, bgs lb. .14 - .16
Rhodamine red toner, molybdated, PMA, kgs., works lb. 6.00 —
Tungstated, PTMA works, kgs lb. 6.60 —
Rhodinol, 5-lb cans lb.42.00 -51.00
Synthetic lb.14.00 -16.00
Rhubarb root, India, whole, bgs lb. .25 - —
powd., bgs lb. .35 - —
Riboflavin, USP, fib dms., kilo or more, dlvd kilo.36.00 - —
Riboflavin, 5-phosphate-sodium, fib dms., kilo or more, dlvd kilo.104.50 —
Rice bran oil, clarified, dms. (c.l. lb. .14 .14½
tanks, dlvd E lb 12 Nom.
Ricinoleic acid (see Castor oil acids, split).
Rochelle salt (see Potassium sodium tartrate).
Roofing pitch (see Coal tar pitch, roofing).
Rose oil, nat., Bulgarian, bots lb.1,152.00- —
Turkish, bots lb.560.00 750.00
Rosemary oil, Spanish, NF, cns., dms lb .97 1.40
Spanish, tech., cns., dms lb .50 1.20
Rosin, gum and wood (see Naval Stores in Protective Coatings market).
Rotenone, fib, dms., works, unit-lb. .10½- —
Resin, 25-45% fib dms., works, unit-lb. .10½- —
Rottenstone, bgs., 5-ton lots, ex-whse lb. .03¾ —
bgs., ton lots, same basis lb. .04¼- —
Rubber solvent, petroleum, 115°F-245°F b.r., tankcars, New Jersey and New York gal. .19 —
Group 3 gal. .13875- —
Houston, Texas gal .155 —
Rue oil, bots lb 2.75 3.00
Rutin, NF, fib dms., 10 kilo lots, kilo.11.00 - —
fib, dms., 5 kilo lots kilo.11.50 - —
fib, dms., 1 kilo kilo.13.00 - —
Ryania, 100% powd., bgs., c.l., works lb. .22 - —
bgs., l.c.l., same basis lb .24 - —

S

S acid, bbls., works lb. 3.25 —
Sabadilla seed, activated, ground with lime, bbls lb. .42 .44
Saccharin, calcium, fib dms., 1,000-lb lots, works lb. 2.50 —
USP, gran., soluble, dms., 1,000-lb. lots lb 1.40 - —
dms., smaller lots lb. 1.50 - —
USP, powd., soluble, insoluble, dms., 1,000-lb lots lb. 1.45 - —
dms, smaller lots lb. 1.55 - —
Saccharin, USP, powd., insoluble, dms., 1,000-lb. lots lb. 1.43 - —
dms., smaller lots lb. 1.53 - —
Safflower oil, dms., New York lb. .795- .1820
tanks, Atl. Coast lb. .795- .1620
Saffron, Mancha Superior, tins lb.19.50 - —
Safrol, dms lb .65 - —
Sage, Dalmatian, bgs lb .40 - —
Greek, cns. lb .15 - —
Italian, cns. lb .18 - —
Sage oil, clary, bots lb.12.00 -15.00
Dalmatian, cns lb. 2.85 3.25
Spanish, cns lb 1.25 1.75
Sal soda (see Soda sal).
Salicylaldehyde, dms., c.l., t.l., f.o.b., plant, frt. equald lb 1.23 —
dms., l.c.l., same basis lb. 1.25 —
Salicylamide, 100-lb dms lb. 1.05 —
Salicylic acid, tech., fib dms., c.l., t.l., dlvd lb. .40½- —
fib dms., l.c.l., dlvd lb. .44¾- —
Salicylic acid, USP, cryst., 200-lb. fib dms., 1,000 lbs. or more lb. .51¾- —
200-lb fib dms., less than 1,000 lbs lb. .54¾ —
Salicylic acid, cryst., 100-lb. fib. dms., 1,000 lbs. or more lb. .53¾- —
100-lb fib dms., less than 1,000 lbs lb. .56¾- —
USP, powd., 100-lb fib dms., 1,000 lbs. or more lb. .58¾- —
100-lb fib dms., less than 1,000 lbs lb. .61¾- —
Salol, NF, gran., bbls., kgs lb 1.20 —
Powdered salol, 25c per lb higher.
Salt, rock, paper bgs., c.l., 100 lbs 1.09 - —
Salt, table, vacuum, common, fine, paper bgs., c.l. 100 lbs 1.34 - —
Saltcake, dom., bulk, works, 100% Na_2SO_4 basis ton.28.00 - —
Saltpeter (see Potassium nitrate).
Sandalwood, E Indian, chips, bgs., lb. .55 .66
powd., fib dms lb .75 .76
Sandalwood oil, cns lb.21.00 —
Sarcosine, tech., tanks, f.o.b., works, frt equald lb. 1.03 —
lb. No stocks.
Sassafras oil, artif., dms lb. .45 —
Nat., dom., dms lb 1.40 —
Savory oil, cns lb. 4.75 —
Schaeffer's salt paste, dms., frt. alld., 100% basis lb. .85 - —
Powd. bgs. frt alld. 100% basis. lb. .95 - —
Scopolamine hydrobromide, USP, bots oz.13.00 —
Sebacic acid, CP bgs., c.l., works lb. .69½- —
bgs., l.c.l., works lb. .71½- —
Purified, bgs. c.l., works lb. .65½- —
bgs., l.c.l., works lb. .67½- —
Seidlitz mixture, fib dms., 5,000-lb. lots lb. .30½- —
fib dms., smaller lots lb. .31 - .33
Selenium, powd., 99½%, dms., dlvd. lb. 7.00 - —
Senega root, bls lb. 2.95 - 3.00
Senna leaves, Alexandria, whole and half, bls lb. .20 - .22
siftings lb. .16 - —
Tinnevelly, No. 1, bls lb. .22 - —
No. 2, bls lb. .18 - —
No. 3, bls lb. .14 - —
pods, bls. lb. .28 - —
powd., bbls., bxs lb. .17 - —
Serpentaria root, bls lb. 6.50 - —
Sesame oil, USP, dms., l.c.l lb. .37 - .38
Sesame seed, Colombian, bgs lb. .15½- —
Lebanese, hulled, bgs lb. .19 - —
Nicaraguan, hulled, bgs lb. .21 - —
nat., bgs. lb. .15 - —
Salvadorian, Nat. bgs lb. .16 —
Shellac, bleached, bonedry, bgs., 1,500-lb. lots lb. .47 - —
dms., c.l. works lb .22 .23½
bbls., 1,500-lb. lots lb. .46 - —
kgs., 1,500-lb. lots lb. .47 - —
Bonedry shellacs prices for less than 1,500-lb. lots 1c. per lb. higher for all packages.

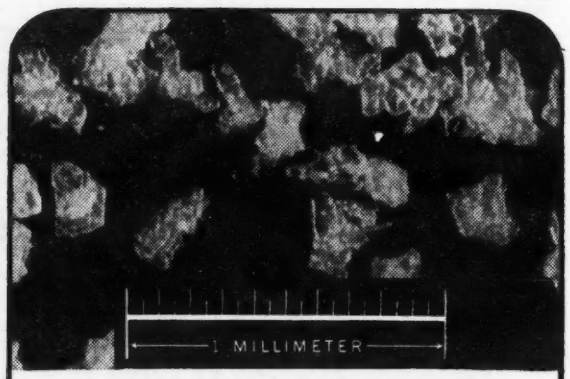
Get Sodium Bicarbonate in the grain size you need every time... FROM CHURCH & DWIGHT



Sodium Bicarbonate U.S.P. Powdered No. 1—For general purpose use in pharmaceuticals, chemical processing, tooth powder, industrial applications.

TYPICAL SCREEN ANALYSIS
CUMULATIVE PERCENT RETAINED BY

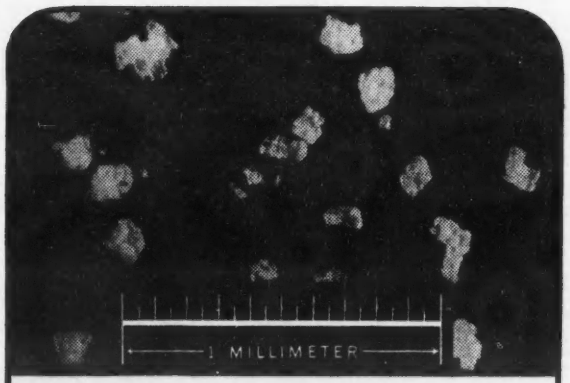
42 Mesh	Trace	200 Mesh	35.0%
100 Mesh	.5%	325 Mesh	70.0%
170 Mesh	20.0%	400 Mesh	80.0%



Sodium Bicarbonate U.S.P. Granular No. 5 for manufacture and compounding of effervescent salts, fruit soft drink tablets and other pharmaceuticals.

TYPICAL SCREEN ANALYSIS
CUMULATIVE PERCENT RETAINED BY

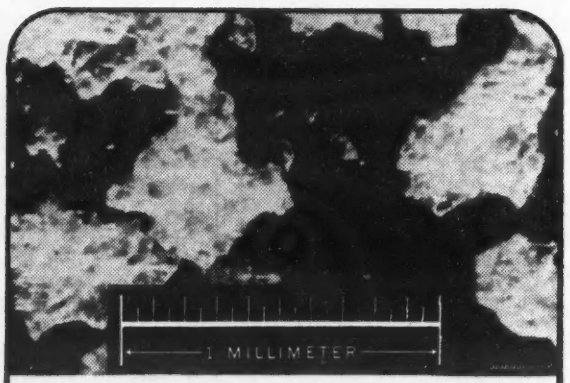
42 Mesh	Trace	100 Mesh	92.5%
65 Mesh	27.0%	170 Mesh	99.0%
80 Mesh	66.5%		



Sodium Bicarbonate U.S.P. Granular No. 4 for use in pharmaceuticals, baking powders and cake mixes.

TYPICAL SCREEN ANALYSIS
CUMULATIVE PERCENT RETAINED BY

80 Mesh	Trace	200 Mesh	91.0%
100 Mesh	1.5%	325 Mesh	98.5%
170 Mesh	80.5%		



Sodium Bicarbonate U.S.P. Extra Coarse Granular No. 6 for use in formulating special pharmaceuticals.

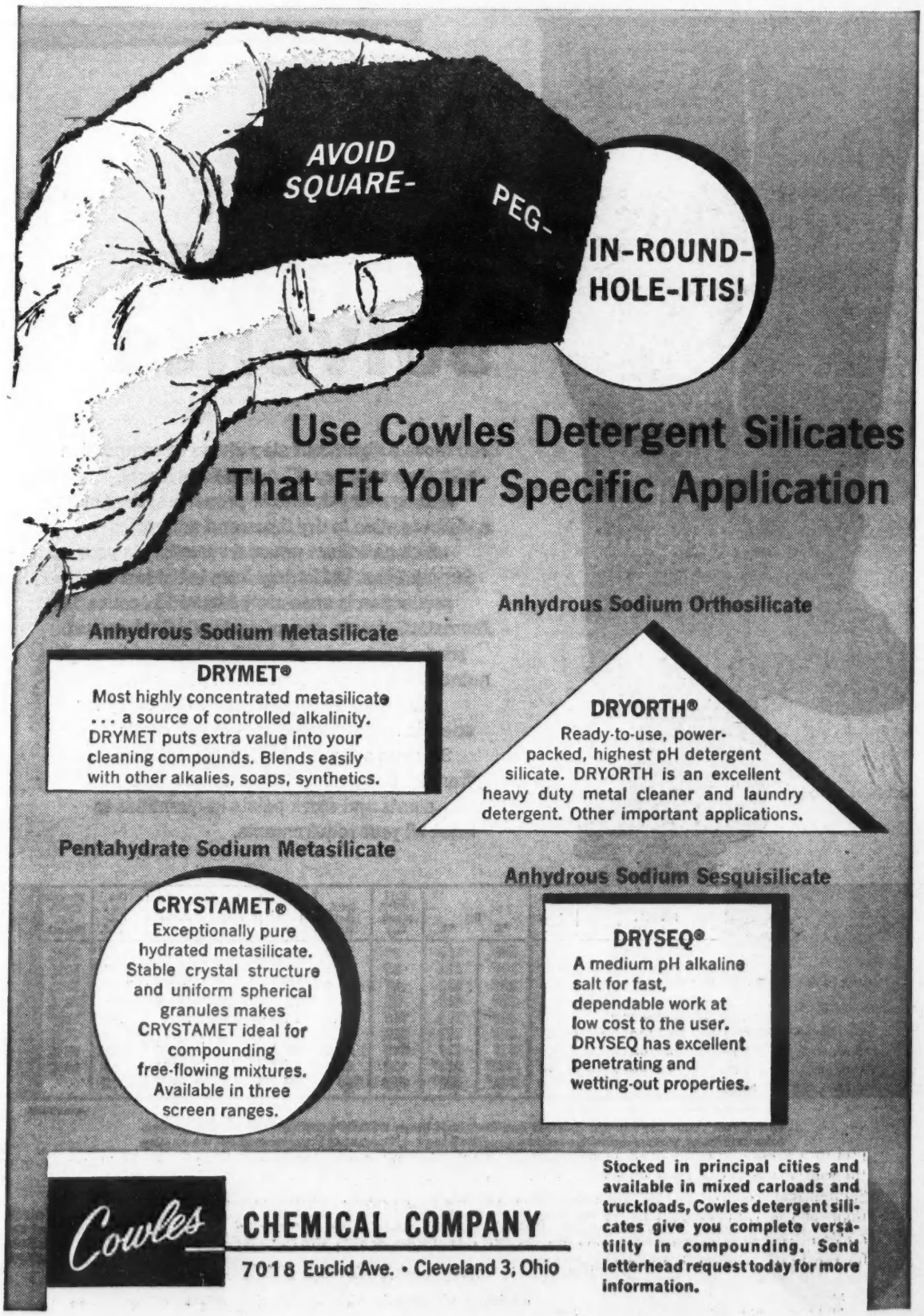
TYPICAL SCREEN ANALYSIS
CUMULATIVE PERCENT RETAINED BY

28 Mesh	None	65 Mesh	91.0%
42 Mesh	13.0%	80 Mesh	98.5%
48 Mesh	33.0%	100 Mesh	99.3%

Why jeopardize the shelf life or sparkling performance of your pharmaceutical products with an inappropriate granulation of sodium bicarbonate? To eliminate risks, specify Church & Dwight. You'll obtain the widest selection of grain sizes available because Church & Dwight is the country's largest supplier of Sodium Bicarbonate U.S.P. You'll also receive for the asking unmatched technical service based on more than 100 years of experience in the formulating of Sodium Bicarbonate. Unusual grain size requirements are given special attention. Try us and see. For technical data on all grades of Sodium Bicarbonate, send for brochure, "Church & Dwight Sodium Bicarbonate—How It Serves Industry Today."

CHURCH & DWIGHT CO., INC., 70 PINE STREET, NEW YORK 5, N.Y.

Shellac, bleached, refd. bgs., 1,500-lb. lots	lb.	.58	—
bbls., 1,500-lb. lots	lb.	.57	—
kgs., 1,500-lb. lots	lb.	.58	—
Shellac, orange, lemon No. 1, bgs., 10-bg. lots	lb.	.37	.39
lemon No. 2, bgs., 10-bg. lots	lb.	.34	.37
superfine, bgs., 10-bg. lots	lb.	.32	.34
Shellac in 1 to 10-bg lots 1c. per lb more.			
Shingle stain oil, tar distillate, dms., c.l., works	gal.	.37	—
dms., t.c.l., works	gal.	.48	—
tanks, works	gal.	.25	—
Sienna pigment, burnt, paper bgs., c.l., works	lb.	.06½-	.18½
paper bgs., t.c.l., works	lb.	.06¾	.17¾
Raw, paper bgs., c.l., works	lb.	.06¾-	.16¾
paper bgs. t.c.l., works	lb.	.07	.17
Silica, amorph., dry-grd. 325 mesh, bgs., c.l., works	ton	25.00	—
bgs. t.c.l. works, ex whse	ton	45.00	55.00
Silica, hard-quartz, 99½%, 325 mesh, bgs., c.l. works	ton	20.00	—
bgs., t.c.l., works	ton	25.00	—
99½% 140 mesh bgs., c.l. works	ton	15.00	—
bgs., t.c.l. works	ton	20.00	—
Silicon tetrachloride, tech., dms., c.l., works	lb.	.20	—
tanks, works	lb.	.15	—
Silver bullion, ingots, cs Frov	oz.	.91⅛	—
Silver cyanide bots, 1,000-oz. lots,	oz.	.94¾	—
bots, 500-oz. lots	oz.	.95¼	—
bots., 100-oz lots	oz.	.96¼	—
Silver nitrate, CP cryst., bots., 1,000 to 4,000 oz., f.o.b. works	oz.	.67¼	—
bots. 250-500 oz., same basis.	oz.	67¾	—
USP granular silver nitrate 4c. per oz higher.			
Silver proteinate mild, USP, 16-oz. bots	oz.	1.46	—
Snakeroot oil, Canada, cns	lb.	40.00	43.00
Soapbark, crushed, bls	lb.	.30	.35
Powd., bls	lb.	.35	.40
Whole, bls	lb.	.20	.25
Soda ash, dense, 58%, paper bgs., c.l., works	100 lbs.	1.90	—
paper bgs., t.c.l., stock pts.,	100 lbs.	3.00	4.77
bulk, c.l. works	100 lbs.	1.60	—
Soda ash, light, 58%, paper bgs., c.l., works	100 lbs.	1.85	—
paper bgs., t.c.l., stock pts.	100 lbs.	3.95	4.72
bulk, c.l., works	100 lbs.	1.55	—
Soda, caustic, flake, 76%, dms., c.l., works, frt equald	100 lbs.	5.20	—
liq., 50% sellers tanks works, dry basis	100 lbs.	2.90	—
50%, rayon type, sellers tanks, works, dry basis	100 lbs.	2.90	3.00
Soda, caustic, liq, 73%, sellers' tanks works dry basis,	100 lbs.	3.00	—
liq., 73% rayon type, sellers' tanks, works, dry basis	lb.	3.00	3.10
solid 76% dms., c.l., works,	100 lbs.	4.80	—
Soda sal. conc. bgs., c.l., works.	100 lbs.	2.50	—
bgs., smaller lots, works	100 lbs.	2.80	—
Sodium acetate annyd., bgs., c.l., dlvd. E	lb.	.14½-	—
bgs., t.c.l., same basis	lb.	.16½-	—
NF, 60% gran. dms. c.l., works,	lb.	.15½-	—
dms., t.c.l. works	lb.	.17½-	—
Sodium alginate, NF, white powd., dom. 300 lbs or more	lb.	1.02	—
Sodium p-aminosalicylate, dms., 100-lb lots or more, frt. adjusted	lb.	1.90	—
Sodium antimoniate bgs. c.l., dlvd. E	lb.	.27½-	—
bgs., t.c.l. dlvd E	lb.	.29	—
Sodium arsenate, 60% arsenic pentoxide, 200 lb. dm., less than ton lots, f.o.b. works	lb.	.24	—
ton lots or more, same basis.	lb.	.23½-	—
Sodium arsenite, 94% soluble pink powder, 75% arsenious oxide, dealers, 100-lb. dms., ton lots or more, f.o.b., works	lb.	.18½-	—
1,600-1,900 dms., same basis	lb.	.19	—
100-500 dms., same basis	lb.	.20	—
Sodium ascorbate, dms., 100-kilos., dms., f.o.b. works	kilo.	6.80	—
less than 100-kilos	kilo.	7.05	—
Sodium benzoate, tech., dms., c.l., t.l., frt. alld	lb.	.35	—
dms., t.c.l., same basis	lb.	.39	—
USP dms., c.l., t.l., frt. alld	lb.	.38	—
dms., ton lots, same basis.	lb.	.43	—
dms., 1,000-lb. lots, same basis.	lb.	.45	—
Sodium bicarbonate, USP, gran., bgs., c.l., works	100 lbs.	2.95	—
bgs., t.c.l., works	100 lbs.	3.85	—
USP powd., bgs. c.l., works,	100 lbs.	2.55	—
bgs., t.c.l. works	100 lbs.	3.45	—
Sodium bichromate, gran., ogs., c.l., t.l., works	lb.	.13	—
bgs., t.c.l. works	lb.	.13½-	.14¾
Sodium bichromate in dms. ¾c. per lb. higher			
Sodium bifluoride, bbls., c.l., works, frt. equald	lb.	.19½-	—
bbls., t.c.l., same basis	lb.	.2025-	—
Sodium bisulfate bulk c.l., works.	100 lbs.	2.00	—
dms., c.l., frt. equald	100 lbs.	3.00	3.60
dms., t.c.l., frt equald	100 lbs.	3.50	4.10
Sodium bisulfite anhyd., bgs., c.l., works	100 lbs.	5.00	—
bgs., t.c.l., works	100 lbs.	5.45	—
Soln., 35° bbls. c.l., works.	100 lbs.	1.70	—
bbls. t.c.l works	100 lbs.	2.20	—
Sodium borate (see Borax)			
Sodium borohydride powd., dms., c.l., works	lb.	19.90	—
dms., t.c.l., works	lb.	33.00	40.00
Sodium borohydride, stabilized water soln., 12% NaBH, 100% basis. dms. works	lb.	15.00	—
Pelletized sodium borohydride $1 per lb. higher in 1,000-lb lots.			
Sodium bromide USP, gran. dms., works	lb.	.40	—
Sodium carbonate, cryst., monohydrated (see Soda, sal)			
Sodium carbonate, monohydrated, bgs., c.l., works	100 lbs.	3.10	—
bgs., t.c.l. works	100 lbs.	3.50	—
Sodium carboxymethyl cellulose (see CMC).			
Sodium chlorate, cryst., 350-lb. dms., c.l., works	lb.	.09	—
dms., t.c.l., works	lb.	.09½-	.10½
Sodium chlorate in 100-lb. dms., only, ¼c. per lb. higher.			
Sodium chloride, tech. (see Salt).			
Sodium chloride, USP, gran., bgs.	lb.	.03	—
Sodium chlorite, tech., dms., c.l., works	lb.	.58	—
dms., 20-dm lots or more, works.	lb.	.66	—
dms., smaller lots, works	lb.	.70	.73
Sodium chloroacetate, tech., dms., c.l., works	lb.	.27	—
dms., t.c.l., works	lb.	.29	—
Sodium chromate, anhyd., fib. dms., c.l., t.l., works	lb.	.14¾-	—
fib. dms., t.c.l., works	lb.	.15¼-	.16¼
Sodium chromate tetrahydrate, bgs., c.l., t.l., works	lb.	.1015-	—
bgs., t.c.l.	lb.	.1065-	.1100
Sodium citrate, anhyd., 200-lb. dm., f.o.b. works E	lb.	.52	—
NF VIII, gran, bgs., c.l., same basis	lb.	.26	—
USP XIV, gran., bgs., c.l., same basis	lb.	.29	—
Sodium citrate, USP, powd. prices ½c. higher.			
Sodium cyanate, dms., 1,000-lb. lots, works	lb.	.85	—
dms., smaller lots, works	lb.	.90	1.10
Sodium cyanide, briquettes or gran., 97 percent min., dms., works, 20,000-lb lots	lb.	.176	—
dms., same basis, 5,000 to 19,999-lb lots	lb.	.188	—
dms., same basis, 1,000 to 4,900-lb lots	lb.	.198	—
Sodium cyclamate, 100-lb dm., f.o.b. works	lb	1.95	—
Sodium diacetate, anhyd., 39-41% acetic acid, dms., c.l., works	lb.	.18	—
250-lb. dms., t.c.l., works	lb.	18¾	—
Tech., 33-35% acetic acid, dms., t.c.l. works	lb.	.15	—
250-lb. dms., t.c.l. works	lb.	15¾	—
Sodium dimethyl dithiocarbamate, 40% soln. dms. c.l., t.l., frt. alld., 100% basis	lb	.42	—
dms., t.c.l., t.t.l., same basis	lb.	.47	.52
tanks, same basis	lb.	.38	—
Sodium ferrocyanide, bgs., 10-ton lots	lb.	.13½-	—
bgs. smaller lots	lb.	.14¼-	—
Sodium fluoride, white, 97%, fib. dms., c.l., works, frt. equald	lb.	.1390-	—
fib. dms., t.c.l., works, frt. equald	lb.	.1465-	—
Sodium formate, bgs., c.l., works.	100 lbs.	7.05	—
bgs., t.c.l., ex whse	100 lbs.	8.65	—
Sodium gentisate, 100-lb. fib. dms.	lb.	5.50	—
Sodium gluconate, refd., 250-lb. dm., f.o.b. works E	lb.	.84	—
Tech., bgs., c.l., t.l., same basis	lb.	.34	—
Sodium hydride, 50% soln. in oil, dms., works	lb.	1.25	2.50
25% soln. in oil, dms., 50 lbs. or less, f.o.b. shipping point.	lb.	2.20	—
dms., 50-99 lbs. same basis	lb.	1.77	—
dms., 100-999 lbs., same basis	lb	1.20	—
dms., 1,000 lbs or more, same basis	lb	.95	—
Sodium hydrosulfide (see Sodium sulfhydrate).			
Sodium hydrosulfite dms. c.l., trt. alld	lb.	23½	—
dms. t.c.l. frt. alld.	lb.	25¾-	—
Sodium hydroxide, NF, pellets, 100-lb dms., 1 to 100-dm lots.	lb	.23½-	.25
Sodium hydroxide, tech (see Soda, caustic).			
Sodium hypophosphite, NF dms. 1,000-lb lots	lb.	.99	—
Sodium hyposulfite (see Sodium thiosulfate).			
Sodium iodide, USP, 300-lb dms. f.o.b. works	lb.	2.13	—
Sodium lauryl sulfate, dms., c.l., dlvd	lb.	.20½-	—
dms., t.t.l., dlvd.	lb.	.21½-	—
tanks, dlvd.	lb	.19½-	—
Sodium lignin sulfonate, bgs., c.l., works	100 lbs	4.25	6.50
t.c.l., bgs., works	100 lbs.	4.40	7.00
Sodium metabisulfite (see Sodium bisulfite).			
Sodium metaborate octahydrate, gran. bgs. c.l. works	ton	210.00	—
bgs., ton lots, ex whse	100 lbs.	8.30	—
bgs., smaller lots, ex whse	100 lbs.	9.61	11.61
Tetrahydrate bgs. c.l. works	ton	210.00	—
bgs., ton lots, ex whse	100 lbs.	14.83	—
bgs., smaller lots, ex whse	100 lbs.	16.08	18.08
Sodium, metallic, bricks, c.l., works.	lb.	.21	—
Fused, 18,000-lb lots or more, works	lb.	.19½-	—
tanks, works	lb.	.17	—
Sodium metalinate, bbls., frt. alld.	lb	.62	—
Sodium metaphosphate, bgs., c.l., f.o.b shipping pt	100 lbs.	11.10	—
bgs., t.c.l., same basis	100 lbs.	11.85	—
dms., c.l., same basis	100 lbs.	11.70	—
dms., t.c.l. same basis	100 lbs.	12.45	—
Sodium metasilicate anhyd., bgs. c.l., works	100 lbs	5.70	—
bgs., 6,000-19,900 lb. lots, works	100 lbs	6.05	—
dms., c.l., works	100 lbs	6.20	—
dms., t.c.l., works	100 lbs	6.55	—
Sodium metasilicate pentahydrate, bgs., c.l., works	100 lbs	4.45	—
bgs., t.c.l., works	100 lbs	4.80	6.75
dms., t.c.l., works	100 lbs	4.95	—
dms., t.c.l., works	100 lbs	5.30	7.25
Sodium molybdate anhyd., dms., works, frt. equald	lb	.92	.99
Cryst., dms., works, frt. alld	lb	.74	.76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Sodium Monoglutamate—Sorbitol

Sodium monoglutamate (see Monosodium glutamate)

Sodium monohydrate (see Sodium carbonate monohydrated)

Sodium naphthionate bbls. lb. .72 - —

Sodium nitrate dom., crude, bgs. c.l. works ton 48.00 - —
bulk, c.l., works ton 44.00 - —
imp., crude 100-lb bgs., c.l., Atl. Gulf, Pac., whse ton 48.00 - —
bulk c.l., same basis ton 44.00 - —

Sodium nitrite, USP bbls., c.l. works, frt equald 100 lbs 9.00 - —
bbls. l.c.l. same basis 100 lbs 11.00 - —

Sodium orthosilicate conc. dms. c.l. works 100 lbs 6.70 —
dms., l.c.l., works 100 lbs 7.05 7.65
Hydrated, flake bbls. c.l. works 100 lbs 5.65 —
bbls., l.c.l. works 100 lbs 7.60 7.90

Sodium oxalate, 88% bgs. works 100 lbs 12.35 - —
90% bgs., works 100 lbs 15.40 - —

Sodium para-aminobenzoate (see Sodium p-aminobenzoate)

Sodium para aminosalicylate (see Sodium p-aminosalicylate)

Sodium pentachlorophenate, briquets, dms., c.l., works, frt equald lb. .26 —
dms., l.c.l., same basis lb. .27½ .34
Pellets, dms., c.l., same basis lb. .26 —
dms., c.l. same basis lb. .27½ .34
Powd., dms., c.l., same basis lb. .25 —
dms., l.c.l., same basis lb. .26½ .33

Sodium pentabarbital, USP, dms., 100 lbs. or more lb. 6.00 - —

Sodium perborate NF, tech., bgs., c.l., works lb. .18½ - —
bgs. l.c.l., works lb. .19 - .21

Sodium peroxide, dms., c.l., t.l., divd E. of Miss lb. .21½ - —
dms., l.c.l., same basis lb. .22 - .22½

Sodium phenobarbital, USP, 100-lb. dms lb. 3.75 - —

Sodium phenosulfonate, USP, IX, gran., dms lb. .52 - .53

NF powd. dms lb. .55 - .56

Sodium phosphate, dibasic, anhyd., bgs. c.l. frt equald 100 lbs. 8.10 - —
bgs., l.c.l., same basis 100 lbs. 8.50 - 9.55

Sodium phosphate, dibasic, cryst., bgs., c.l., t.l., frt equald 100 lbs. 4.75 - —
bgs., l.c.l., frt. equald 100 lbs. 5.15 - 5.90

Dibasic duohydrate, bgs., c.l. frt equald 100 lbs. 7.75 - —
bgs., l.c.l., same basis 100 lbs. 8.25 - —

Monobasic, anhyd bgs., c.l. frt equald 100 lbs. 9.15 - —
bgs., l.c.l., same basis 100 lbs. 9.55 -10.15

Tribasic, anhyd. bgs. c.l. frt. equald 100 lbs. 9.15 - —
bgs., l.c.l., frt. equald 100 lbs. 9.60 -10.20

Sodium phosphate tn dms. 60c. to 80c. higher than bgs

Sodium phosphate, USP, dried, powd., bgs., dms., works lb. .19 - .20½

Sodium picramate, tech., paste, dms., f.o.b. works, frt. equald lb. .90 - —

Sodium proplonate, any quantity, dms., divd. E. of Rockies, lb. .34½ - —

Prices W of Rockies 3c. per lb. more.

Sodium prussiate, yellow (see Sodium ferrocyanide)

Sodium pyrophosphate, acid, bgs., c.l., works, frt. equald, 100 lbs. 11.25 - —
bgs., l.c.l., same basis 100 lbs. 12.00 -12.50

Sodium pyrophosphate, terric, dms., c.l., t.l., works lb. .36 - —
dms. l.c.l. works lb. .37 - .39

Tetrabasic, anhyd., bgs., c.l., works, frt. equald 100 lbs. 7.55 - —
bgs., l.c.l., same basis 100 lbs. 8.30 - —

Sodium salicylate USP dms., 1,000-lbs or more lb. .78½ - —
dms. less than 1,000 lbs. dms.lb. .81½ - —

Sodium sesquicarbonate, bgs., c.l., works 100 lbs. 2.35 - —

Sodium sesquicarbonate, bgs., l.c.l., divd zone 1 100 lbs. 4.10 4.35
divd zone 2 100 lbs. 4.35 4.60
divd zone 3 100 lbs. 4.75 4.90
divd zone 4 100 lbs. 5.35 5.60

Sales zones are (1) Atl. states E. of Miss., R and N of south bound of Ky. and Va., Ala., La. and Miss. south of 31°; Tex. E. of 100°; S of 31° Fla.; also Me., N. H. and Vt. in which there are special county zones; Davenport, Ia., and St. Louis; (2) Ark. E. of 98° Ga.; Iowa (except Davenport) Minn., Mo. (except St. Louis) Neb. E. of 98° N. C., S. C., Tenn and Tex. N. of 31° and E. of 100° (except Wichita Falls); also Ala., La. and Miss. No of 31°; (3) Ark. W. of 96°, Kan., Neb. W. of 98° N. D., Okla., S. D., Tex., W. of 100° (including Wichita Falls, excluding El Paso); (4) Ariz., Colo., Idaho, Mont., Nev., N. M., Utah Wyo. and El Paso, Tex.

Sodium sesquisilicate, anhyd., bgs., c.l., t.l., works 100 lbs. 5.70 - —
dms., c.l., t.l., works 100 lbs. 6.20 - —

Sodium sesquisilicate, hydrated, bgs., c.l., works 100 lbs. 5.00 - —
bgs., 6,000-19,900 lb. lots, works 100 lbs. 5.35 - —
dms., c.l., works 100 lbs. 5.50 - —
dms., 6,000-19,900 lb. lots, works, 100 lbs. 5.85 - —

Sodium silicate, liq., 40° Be., 1:3.2, turbid, dms., c.l., works, 100 lbs. 1.65 - —
dms., l.c.l., works 100 lbs. 1.90 2.40
tanks, works 100 lbs. 1.20 —
47° Be. 1:2.9, turbid, dms., c.l., works 100 lbs. 2.25 —
dms., l.c.l., works 100 lbs. 2.60 3.45
tanks, works 100 lbs 1.90 —
52° Be 1:2.4 turbid, dms., c.l., works 100 lbs 2.65 —
dms., l.c.l., works 100 lbs 3.00 3.50
tanks, works 100 lbs 2.30 —
Solid, 1:3.2 bgs. works ton 67.50 —

Sodium silicofluoride, bgs., c.l., works lb. .065 —
bgs., l.c.l., works lb 725- —

Sodium silicofluoride in dms. 0.4c per lb. higher

Sodium stannate, dms. works, frt. alld., E lb. .633 - .692

Sodium sulfa drugs (see Sulfa name)

Sodium sulfanilate bbls. works lb. .22 —

Sodium sulfate, NF VII, dried, powd., dms lb. .22½ - —
Tech., anhyd. bgs c.l. divd E. ton 56.00 - —

Sodium sulfate, tech., detergent, rayon grade, bgs., c.l., works ton 38.00 - —
bulk, c.l., works ton 34.00 - —
USP, cryst., fib dms lb 17½ .18

Sodium sulfhydrate, flake 70-72%, dms. c.l. works, frt. equald lb. .07¼ —
dms., l.c.l. same basis lb. .08¼ —
Liq. 40-44% tanks works, 100% basis ton 130.00 —

Sodium sulfide, flake, dms., c.l., works, E., frt equald lb .06 —
dms., l.c.l., same basis lb .07 —
Fused, bbls., c.l., works, E., frt. equald lb. .05½ - —
bbls., l.c.l., same basis lb. .06½ - —

Sodium sulfite, anhyd., powd., bgs., c.l., works 100 lbs. 7.55 —
bgs., l.c.l. same basis 100 lbs. 7.95 —
Anhyd., tech., bgs. c.l., works. 100 lbs 3.50 —
bgs., t.l., same basis 100 lbs 4.00 —

Sodium sulfocyanide, CP (see Sodium thiocyanate).

Sodium tetraborate (see Borax).

Sodium tetrasulfide, liq., 40%, dms., c.l., works frt. equald lb. .04½ - —
dms., l.c.l. same basis lb. .05½ - —

Sodium thiocyanate, CP, dms lb. .55 .68
Tech., anhyd., dms., 1 ton lots or more, works lb. .367 - —
dms., less than ton lots, works lb. .387 - —

Sodium thiosulfate, NF cryst., bbls. lb. .13½ - —
Tech., anhyd. 100-lb bgs. c.l., t.l., frt. equald 100 lbs. 7.75 —
100-lb. bgs. l.c.l., t.t.l., frt. equald 100 lbs. 8.15 - —

Sodium thiosulfate, tech., anhyd., photo grade, 64-lb bgs., c.l., t.l., frt. equald lb. .0775 - —
64-lb bgs. l.c.l. t.t.l., frt. equald lb. .0815 - —
Tech., pentahydrate, photo grade, 100-lb bgs., c.l., t.l., frt. equald 100 lbs. 4.95 - —

Sodium thiosulfate, tech., pentahydrate, photo grade, 100-lb. bgs., l.c.l., t.t.l., frt. equald 100 lbs. 5.20 - —

Sodium titanate, etns. c.l., works. lb. .14¼ —
etns., 5-ton lots, works lb. .14½ —
etns., 1-ton lots or less, works lb. .14¾ - —

Sodium trichloroacetate, 90%, 100-lb dms., c.l., frt alld E. lb. .35 - —
50-lb. dms., c.l., frt. alld. E lb. .35½ - —
10-lb cns., c.l., frt alld E lb. .42 —

Prices on Sodium trichloroacetate W of the Rockies are 1¾c. per pound higher.

Sodium tripolyphosphate, bgs., c.l., works, frt. equald 100 lbs. 7.90 - —
bgs., l.c.l., same basis 100 lbs. 8.65 - —

Sodium trisilicate, powd., 1:3.2, bgs., c.l., works 100 lbs. 8.95 —
bgs., l.c.l., works 100 lbs. 9.70 -13.15
dms., c.l., works 100 lbs. 9.45 —
dms., l.c.l., works 100 lbs. 10.20 -10.60

Sodium tungstate, tech., kgs. divd. E lb. 1.33 - —

Sodium-ammonium phosphate, purif., cryst. dms., works lb. .52 - —

Sodium-carboxymethyl cellulose (see CMC).

Sodium-cinchophen (see Cinchophen-sodium).

Sodium formaldehyde sulfoxylate, dms., t.l., divd lb. .22½ - —
dms., l.t.l., same basis lb. .23 - —

Sodium-zirconyl sulfate, fib dms., 1,000-lb lots or more works lb. .28 - —
fib. dms., smaller lots, same basis lb. .30 - —

Solvent naphtha, coaltar, high-flash, tanks, frt equald gal. .30 - .35½

Solvent naphtha, petroleum, straight aromatic, 310°-360°F b.r., 14°-16°C. m.a.p., tankcars, New Jersey and New York gal. .29 - —
Houston, Texas gal. .29 - —
355°-420°F. b.r., 17°-18°C. m.a.p., tankcars, New Jersey and New York. gal. .30 - —
Houston, Texas gal. .30 - —

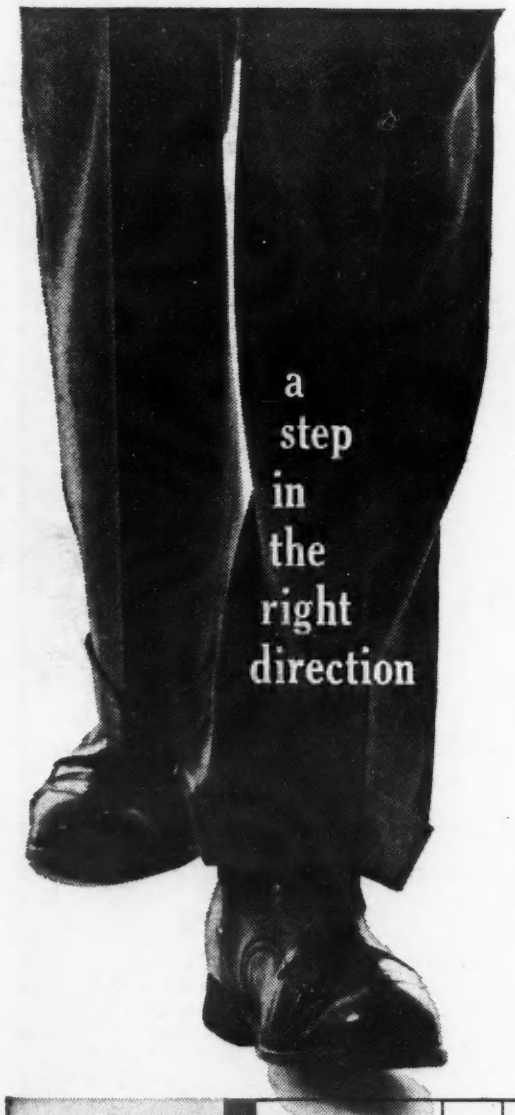
Solvent naphtha, petroleum, partial aromatic, 211°-265°F b.r., 31°C. m.a.p., tankcars, New Jersey and New York gal. .235 - —
288°-340°F. b.r., 22°C m.a.p., tankcars, New Jersey and New York gal. .275 - —

Solvent naphtha, 319°-380°F. b.r., 27°C. m.a.p., tankcars, New Jersey and New York gal. .27 - —
322°-395°F b.r., 28°C m.a.p., tankcars, New Jersey and New York gal. .28 - —

Sorbitan monostearate fib dms., 20,000-lb. lots, works lb. .33½ - —
fib dms., 10,000 to 20,000-lb lots, works lb. .35½ - —
fib dms., smaller lots, works lb. .38½ - .40½

Sorbitan tristearate, fib dms. 20,000-lb. lots, works lb. .34 —
fib dms., 10,000 to 20,000-lb lots, works lb. .36 - —
fib dms., smaller lots, works lb. .39 - .41

Sorbitol NF, reg., 70% aqueous, dms., c.l., works lb. .18 - —
dms., l.c.l works lb. .19 - —
tanks, works lb. .16¼ —
cryst., resin grade, pellets, dms., c.l. works lb. .23 —
dms. 1 to 5-ton lots, works, lb 25 .26
powd., dms., c.l., works lb. .38½ —
dms., 10,000 to 20,000 lb. lots, works lb. .40½ —



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sc aromatic solvents

You move a significant step ahead of competition with high solvency SC Aromatic Solvents. Among many desirable properties, they offer a wide variation in dry times and solvencies which give them unusual versatility in your formulations. Uniformity from initial test to production is absolutely assured because SC Aromatic Solvents always start with the identical crude. Each run is carefully inspected through numerous quality-control check points until final delivery to your plant. Call today for specific recommendations—SC Aromatic Solvents are available for immediate delivery from 21 Solvents and Chemicals Group plants and stock points in quantities to meet all your requirements.

properties of SC aromatic solvents

PRODUCT	Initial °F.	Dry °F.	Dry °C.	Flash Point °F. (Closed Cup)	Speed Evap. Min.	Kauri Butanol Value	Aniline Point °F.	Specific Gravity @ 60°F.	Lbs. Per Gal. @ 60°F.	Aromatic Equivalent Content
SC Solvent #1	211	240	116	30	2.5	86.4	+ 1	.8259	6.88	74%
SC Solvent #1-A	202	235	113	25	2.5	67	+48	.8003	6.66	52%
SC Solvent #2	270	308	153	81	14.0	80	— 2	.8418	7.01	76%
SC Solvent #2-B	277	370	188	81	21.5	75	+12	.8388	6.99	68%
SC Solvent #3	356	400	204	135	64.0	72	+24	.872	7.26	69%
SC Solvent #28	329	379	193	122	51.0	73	+14	.8597	7.16	74%
SC Solvent #100	321	351	177	115	21.0	93.2	—37	.8708	7.25	96%
SC Solvent #150	369	412*	211*	152	98.0	91.8	—26	.8899	7.41	96%
SC Solvent #450	450	588*	309*	212	750	73	+10	.9279	7.73	

*End Point

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U.S.I. CHEMICAL NEWS

February ★ A Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1961

Cesium Metal Is Now Being Produced by U.S.I.

Cesium metal, 99%+ pure, is now available in commercial quantities from U.S.I. Production facilities can turn out 50-75 pounds per week. Current price is pegged at $100 per pound in 1, 5, or 20 pound cylinders. Substantially larger quantities could be produced if new, large-volume applications should develop.

Cesium is currently used in minute quantities in TV cameras and electron multiplier photoelectric cells. Many potential applications are based on cesium's ability to ionize easily. Because of this, it may some day be needed in large volume for thermonuclear converters based on plasmas, and as a propellant in ion propulsion motors for space ships. Other less exotic applications for cesium include: grain refining agent for other metals such as aluminum; heat transfer

MORE

ATTENTION: Ethyl Alcohol Users

The Internal Revenue Service of the U.S. Treasury Dept. has issued Publication No. 443 (9-60), covering current regulations on "Distribution and Use of Denatured Alcohol and Rum". Publication No. 444, issued at the same time, covers "Distribution and Use of Tax-Free Alcohol". Both booklets can be obtained, at a cost of 25¢ each, from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D. C.

The information contained in these booklets has been summarized in the new Government Regulations Supplement to the U.S.I. Ethyl Alcohol Catalog, offered in the November Chemical News. Because of great demand, this supplement has been reprinted and revised to contain all regulations changes up to Dec. 1, 1960. Copies of the Regulations Supplement and the Alcohol Catalog may be obtained from Technical Literature Department, U.S.I. Chemical News, 99 Park Avenue, New York 16, N. Y.

Naphthalene Shortage Eased By Sale of Mixed Streams

Shortage May Be Eased Further by Use of Economical Sodium Desulfurization Process for Mixed Streams.

Coal tar naphthalene suppliers are now making mixed streams—naphthalene plus isomers—available to phthalic anhydride producers. Isomers can also be converted to phthalic, although yield is lower than for straight 78° naphthalene, and some processing problems are encountered.

Other Solutions to Shortage

This is the first step in easing the naphthalene shortage resulting from low steel production. Suppliers are also working on maximum conversion of coal tar to naphthalene and isomers, even at the expense of tar acid, solvent and creosote production. Also, more petroleum naphthalene capacity is being built.

According to one report, mixed streams can be used by phthalic producers only in fixed-bed processes. These streams must be desulfurized further for fluid-bed use. Consequently, further easing of the situation might result from use—by mixed-stream suppliers and/or phthalic makers—of an economical desulfurization process recently developed by U.S.I. Investigations are currently underway.

Desulfurization Process Uses Sodium

This is a semi-continuous, commercial process for desulfurization through

MORE

Titanium and Zirconium Used as Bonding Agents In Ceramic-to-Metal Seals

A ceramic-to-metal seal which forms a true molecular bond is one of the unique features of a new, rechargeable nickel-cadmium battery designed for outer-space service. It is reported that the technique developed to achieve this bond now makes possible the sealing of large ceramic inserts to flat metal surfaces.

A key to the process is said to be the use of a thin layer of bonding metals, such as titanium or zirconium, between ceramic and base metal. Fusing at 1,000°F. in a vacuum is reported to yield a complex alloy from the ceramic, base metal and bonding metals.

The technique is used in the new battery to join the iron-nickel contact terminals, the ceramic insulator and the body of the cell. The seal is claimed to be truly hermetic, giving high reliability and long life in outer space.

Pencil points to ceramic-to-metal hermetic seal on new, rechargeable nickel-cadmium battery designed for outer space service. (Photo courtesy Gulton Industries.)

Polyethylene Lab Being Built by U.S.I. Abroad

A new customer service laboratory is being constructed at Baar, Switzerland, by U.S.I.-International—known officially as Sales and Development Company of National Distillers and Chemical Corp. (International) S.A. Occupancy is scheduled for about July, 1961.

The new facility will support the efforts of U.S.I.'s European representatives for PETROTHENE® polyethylene resins. It is designed to help them give their customers the close technical assistance the polyethylene market demands.

The laboratory's processing and test equipment will be designed to meet European standards and operating conditions. It will demonstrate techniques for processing polyethylene, and will conduct research and evaluation studies to help improve products and develop new markets.

February ★ **U.S.I. CHEMICAL NEWS** ★ 1961

CONTINUED

Cesium

medium in power generators. Cesium also has potential in large catalytic processes since it can be recycled by sodium reduction of the recovered chloride.

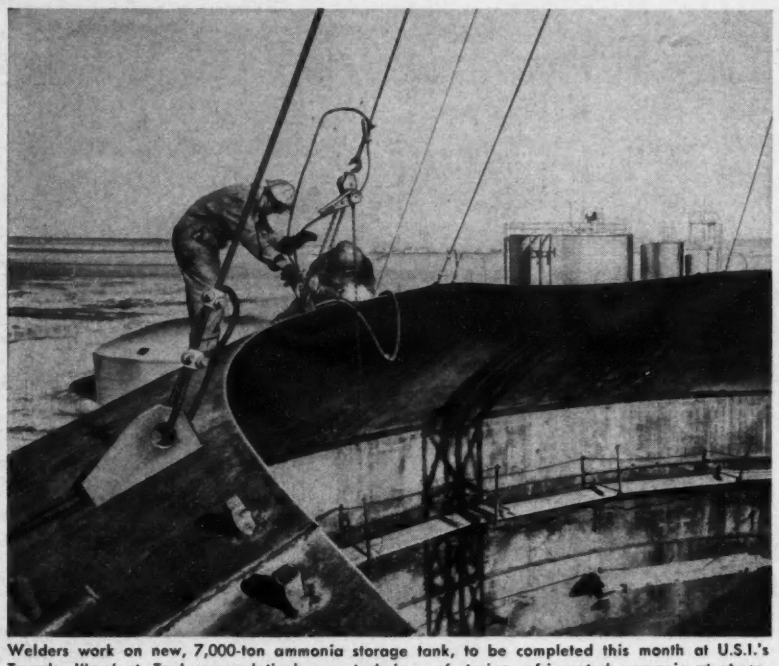
The commercial availability of cesium is an outgrowth of U.S.I.'s research and development program on the use of sodium for metals production. This research has already resulted in the commercial availability of titanium and zirconium from U.S.I.'s affiliate, Reactive Metals Corporation.

CONTINUED

Naphthalene

treatment with 1.5% by weight of metallic sodium. Sulfur content can be reduced to under 0.05% at a cost of less than .5¢ per pound. Capital investment for a plant to treat 50-60 million pounds per year would be about $50,000.

For further information on this process, send for the new U.S.I. technical data bulletin "Desulfurization of Naphthalene by Sodium". Address Technical Literature Dept., U.S.I. Chemical News, 99 Park Ave., New York 16, N. Y.



Welders work on new, 7,000-ton ammonia storage tank, to be completed this month at U.S.I.'s Tuscola, Ill. plant. Tank uses relatively new technique of storing refrigerated ammonia at atmospheric pressure rather than storing it in pressurized tanks at moderate temperatures.

Shown under construction is inner tank, 88 feet in diameter and 56 feet high, which holds ammonia. This tank is surrounded by 2½ feet of insulation, and another steel tank which keeps moisture out of insulation. Ammonia is maintained at temperature of minus 28°F. by surface evaporation of ammonia itself. Evaporated ammonia is recompressed, condensed and recirculated to tank.

TECHNICAL DEVELOPMENTS

Information about manufacturers of these items may be obtained by writing U.S.I.

Heavy water can now be obtained on rental basis, for intervals from 3 months to 2 years. Cost depends on time used and amount of dilution resulting. Said to cost much less than purchasing or producing. **No 1680**

Seven special slide rules and calculators designed for chemists are described in literature now available. Help solve problems on radioactivity, structure of elements, chemical equations, pH, humidity, solutions, gases. **No. 1681**

Desulfurization of coke oven BTX by sodium is subject of new technical data bulletin now offered. Describes process, results and economies, tells when to use, gives costs. Includes tables and illustrations. **No. 1682**

Guide to translations of Soviet research in chemistry and metallurgy can now be obtained. Booklet describes 49 outstanding titles, including books, monographs, symposia, journals, and collections. Gives prices. **No. 1683**

New adhesive for multiwall polyethylene bags now on market. Used to spot-cement intermediate ply of polyethylene sheet, top and bottom, to adjacent layers of kraft. Said to form strong, positive bond. **No. 1684**

Circulating thermostats are now available which can be used for either heating or cooling, for control of liquid temperatures in a closed system, or for circulation of liquids to outside sources such as refractometers, viscosimeters. **No. 1685**

A new statistical technique for investigations involving a large number of variables—10, 20 and more—is described in literature now available. It is a non-mathematical method said to give fast and simple answers. **No. 1686**

Para-chlorothiophenol is now being marketed commercially. Material is suggested as intermediate for making oil additives, agricultural chemicals, plasticizers, rubber chemicals, dyes, wetting agents, stabilizers. **No. 1687**

New, revised edition of National Fire Codes can now be purchased. Incorporates important changes in many fire safety standards. Compiles 181 standards in 7 volumes. Includes 42 new or revised fire safety standards. **No. 1688**

New recording/controlling instrument employing fluorescence techniques is claimed to combine operating simplicity with high sensitivity and long-term stability. Provides signals for continuous recording or automatic controls. **No. 1689**

PRODUCTS OF U.S.I.

Heavy Chemicals: Metallic Sodium, Anhydrous Ammonia, Ammonium Nitrate, Nitric Acid, Nitrogen Fertilizer Solutions, Phosphatic Fertilizer Solution, Sulfuric Acid, Caustic Soda, Chlorine, Sodium Peroxide.

Organic Solvents and Intermediates: Normal Butyl Alcohol, Amyl Alcohol, Fusel Oil, Ethyl Acetate, Normal Butyl Acetate, Diethyl Carbonate, DIATOL®, Diethyl Oxalate, Ethyl Ether, Acetone, Acetoacetanilide, Acetoacet-Ortho-Chloranilide. Acetoacet-Ortho-Toluidide, Ethyl Acetoacetate, Ethyl Benzoylacetate, Ethyl Chloroformate, Ethylene, Ethyl Sodium Oxalacetate, Sodium Ethylate, Urethan U.S.P. (Ethyl Carbamate), Riboflavin U.S.P.

Pharmaceutical Products: DL-Methionine, N-Acetyl-DL-Methionine, Urethan USP, Intermediates.

Ethyl Alcohol: Pure and all denatured formulas; Anhydrous and Regular Proprietary Denatured Alcohol Solvents SOLOX®, FILMEX®, ANSOL®M, ANSOL PR

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Sorbitol, soln., comyl., aqueous, dms., c.l., works lb. .28 - —
dms., l.c.l., works lb. .27 - —
tanks, works lb. .23¼- —

Soya protein, chemically isolated, old process, bgs., c.l., works. lb. .23 - —
bgs., l.c.l., works lb. .23¼- .23½
Chemically isolated, new process, bgs., c.l., works lb. .20 —
bgs., l.c.l., works lb. .20¼- .29½

Soybean meal, 44% bulk, unrestricted, Decatur ton.57.00 - —

Soybean oil, crude, tanks, Decatur lb. .12½- —

Foots, soapstock, acid 95%, tanks, lb. .05¾ Nom.

Refd., alkali, dms. lb. .16¾- .16½
tanks lb. .14¾- —
tanks lb. .15⅞- .16⅛

Clarified, dms. lb. .13⅞- —
tanks lb. .16¾- .16½
tanks lb. .14⅜- —

Soybean oil acids, dbl. dist., dms., lb. .16 - .18½
tanks lb. .13½- —
S. D., dms. lb. .14¾- .17¼
tanks lb .12¼- —

Sparteine sulfate, cns., 100 oz. or more oz. .80 - —

Spearmint leaves, dom., bls lb. .75 - —

Spearmint oil, NF, dms lb. 6.75 - —

Sperm oil, bleached winter, 45°, dms lb. .1675- .1775
tanks lb. .1475- —
Nat., winter 45°, dms lb. .1575- .1675
tanks lb .1375- —

Spermaceti wax, blocks, cs lb. .32 - .33
Cakes, cs. lb. .33 - .34

Spruce oil, cns., dms. lb. 2.10 3.55

Squill, white, bls. lb. .16 - .18
Powd., bbls., bxs. lb. .17 - .20

St. John's bread, edible, bls. lb. .17 - —

Stannic chloride, anhyd., dms., works lb. .803 - .825

Stannic oxide, dms., dlvd. lb. 1.06 - 1.07

Stannous chloride, anhyd., dms., works lb. .995 - 1.250
works lb. .86 - .87

Stannous sulfate, dms., works lb. 1.05 - 1.07

Star root (see Helonias root)

Stargrass root (see Aletris root.)

Stavesacre seed, bgs. lb. .60 - .61

Stearic acid, dbl., pressed, bgs. lb. .15¾- .18¼
Single-pressed, bgs. lb. .15¼- .17¾
Triple-pressed, bgs. lb. .17½- .20

Stoddard solvent, petroleum, tanks, east coast, New Jersey, New York gal. .18 - —
tanks, Houston gal. .1475- —
tanks, group 3 gal. .12875- —

Stramonium leaves, bgs. lb. .16½- .18

Streptomycin sulfate, bulk gram. .03 - .032

Strontium bromide, NF, cryst., gran., 150-lb. dm., frt. equald lb. 1.00 - —

Strontium carbonate, pure, dms., 2-ton lots or more, works lb. .35 - —
dms., 1-ton lots, works lb. .37 - —
Tech., dms., works lb. .19 - —

Strontium chromate, fib, dms., dlvd. lb. .48 - —

Strontium iodide, jars, 25-lb. lots lb. 3.57 - —

Strontium nitrate, bgs., c.l., works. 100 lbs.11.00 - —
bgs., l.c.l., works 100 lbs.12.00 - —

Strontium salicylate, NF, dms lb. 1.88 - —

Strontium sulfate, air floated, 90%, 325 mesh, bgs., works. ton.56.70 -66.15

Strophanthin G (see Quabain, USP).

Strophanthin K, bots. oz.25.00 -25.50

Strophanthus seed, Kombi, biologically tested, bgs. lb. 2.50 - 3.00

Styrax gum, USP, cs. lb. 4.50 5.50

Styrene monomer, polymer grade, 99.6%, dms., c.l., frt. alld. lb. .17 - —
dms., l.c.l., same basis lb. .19 - —
tanks, same basis lb. .14½- —

Styrene monomer, tech., 99.2%, dms., c.l., frt. alld. lb. .1509- —
dms., l.c.l., same basis lb. .1709- —
tanks lb. .1259- —

Above prices are escalated for each calendar quarter on the basis of cost of benzene and petroleum refining labor.

Styrolyl acetate, bots. lb. 1.03 - 1.10

Succinic acid, purif., cryst., dms., t.l., frt. alld lb. .62 - —
dms., l.t.l., same basis lb. .63 - .75

Succinic anhydride, dms., c.l., t.l., dlvd lb. .51 - —
dms., l.c.l., same basis lb. .52 - —

Sucrose, refd., white, bgs., refy lb. .0955- —

Sucrose acetate, isobutyrate, 90%, dms., t.l., dlvd lb. .33½- —
dms., l.t.l., same basis lb. .35 - —
tanks, same basis lb. .31 - —
100%, t.l., dms., dlvd. lb. .35½- —
l.t.l., dms., same basis lb. .37 - —

Sucrose octa-acetate, denaturing grade, 100-200-lb. lots, bgs., l.c.l., works lb. 1.00 - —

Sugar (see Sucrose)

Sugar cane, wax, dom., refd., slabs, 80-lb. ctns., works lb. .60 - .65
80-lb. ctns., spot lb. .65 - .75

Sulfabenzamide, dms. kilo. 8.80 - 9.90

Sulfabenzamide-sodium, dms. kilo. 9.00 -10.10

Sulfacetamide, USP, fib. dms kilo. 6.61 - 6.83

Sulfacetamide-sodium, USP, fib. dms kilo. 8.15 - 9.25

Sulfadiazine, USP, microcrystals, dms kilo.23.35 -24.45

USP, powd., dms. kilo.22.60 -23.70

Sulfadiazine-sodium, USP, dms kilo.24.80 -25.90

Sulfaguanidine, NF X, dms kilo. 5.50 6.60

Sulfamerazine-sodium, USP, powd., dms kilo.24.80 25.90

Sulfamethazine, USP XV, microcrystals, dms kilo.19.65 -20.75

USP XV, powd., dms. kilo.18.75 -19.85

Sulfamic acid, cryst., dms., c.l., t.l., works 100 lbs.16.00 —
dms., l.c.l., t.l., works 100 lbs.17.50 18.50

Gran., dms., c.l., t.l., works. 100 lbs.14.75 —
dms., l.c.l., t.l., works 100 lbs.16.25 -17.25

Sulfanilamide, NF, reg., 1,000 lb., frt. equald lb. 1.50 - —
NF, fib dm., frt. equald lb. 1.53 - —

Sulfanilamide quinoxaline, veterinary, dms kilo.16.28 - —

Sulfanilic acid, tech, dms., c.l., frt. alld lb. .21 - —
dms., l.c.l., frt. alld lb. .23 - —

Sulfapyridine, USP XV, powd., bots., tins kilo.15.45 -16.55

Sulfapyridine-sodium, monohydrate, dms kilo.16.55 -17.65

Sulfathiazole, NF X, microcrystals, dms kilo. 6.25 6.90
NF X, powd., dms. kilo. 5.50 6.15

Sulfathiazole-sodium, NF X, dms., 1,000-lb. lots or more lb. 2.35 - —

Sulfur, comi., flour, bgs., mines. 100 lbs. 2.35 - —
bbls., mines 100 lbs. 3.30 - —
lump, bgs., mines 100 lbs. 2.25 - —
bbls., mines 100 lbs. 2.80 - —

Sulfur, crude, dom., bright, bulk, f.o.b. cars, mines long-ton.23.50 - —
export, f.o.b. vessels, Gulf ports. long-ton.25.00 - —
US and Canada, f.o.b. vessels Gulf ports long-ton.25.00 - —

Domestic dark sulfur prices are $1 per long-ton lower.

Sulfur, crude, imp., Mexican, bulk, filtered, f.o.b., vessel, Coatzacoalcos long-ton.24.00 - —

Mexican dark sulfur price is $1 per long-ton lower.

Sulfur, refd., flowers, NF, bgs., mines 100 lbs. 5.65 - —
bbls., mines 100 lbs. 7.00 - —
flour, light, bgs., mines 100 lbs. 5.25 - —
bbls., mines 100 lbs. 6.25 - —
lump, bgs., mines 100 lbs. 4.95 - —
rolls, bgs., mines 100 lbs. 5.50 - —
bbls., mines 100 lbs. 6.25 - —
salt block, bgs., mines 100 lbs. 4.65 - —
virgin block, bbls., mines 100 lbs. 4.70 - —

Sulfur, rubbermakers, comi., reg., bgs., mines 100 lbs. 2.45 - —
bbls., mines 100 lbs. 3.70 - —

98-100%, passing through 325 mesh, bgs., mines 100 lbs. 2.55 - —
bbls., mines 100 lbs. 3.80 - —

Sulfur, rubbermakers, refd., bgs., mines 100 lbs. 4.90 - —
bbls., mines 100 lbs. 6.05 - —

treated, 2.5% mineral oil, bgs., mines 100 lbs. 2.75 - —
bbls., mines 100 lbs. 4.00 - —

Sulfur dichloride, ret. dms., c.l., works, frt. equald lb. .05¼- —
ret. dms., l.c.l., same basis lb. .06¼- —
tanks, same basis lb. .04½- —

Sulfur dioxide, liq., comi., cyls., works, frt. equald lb. .10 - .12
multi-unit cars, works lb. .0535- —
tanks, works lb. .045 - —

Sulfur dioxide, refrigeration, cyls., dlvd lb. .33 - —

Sulfur monochloride, 55-gal. non-ret. dms., c.l., frt. equald lb. .05¼- —
dms., l.c.l., same basis lb. .06¼- —
tanks, same basis lb. .04½- —

Sulfuric acid, 60° Be, cbys., c.l., works 100 lbs. 2.00 - —
cbys., l.c.l., works 100 lbs. 2.30 - —
tanks, works ton.18.60 - —

Sulfuric acid, 66° Be, cbys., c.l., works 100 lbs. 2.25 - —
cbys., l.c.l., works 100 lbs. 2.55 - 3.35
tanks, works ton.22.35 - —
98%, tanks, works ton.23.50 - —
99%, tanks, works ton.23.70 - —

Sulfuric acid, 100%, tanks, works. ton.23.95 - —

CP, NF, consumers' cbys., c.l., frt. equald lb. .12¾- —

Sulfuric acid, CP, NF, consumers', cbys., l.c.l., same basis. lb. .14¼- .14¾

5-pt. bots., extra, cs., c.l., works, frt. alld lb. .16¼- —

5-pt. bots., extra, cs., l.c.l., same basis lb. .17¾- .18¼

Sulfuric acid, fuming (oleum), 20%, tanks, works ton.25.00 - —
40%, tanks, works ton.29.00 - —
65%, tanks works ton.39.50 - —

Superphosphate, run-of-pile under 22% a.p.a., pulv., bulk, c.l., Baltimore unit-ton. .90 - .93
bulk, c.l., Carteret, N. J. unit-ton. .90 - .93

Superphosphate, triple, 48% or more a.p.a., pulv., bulk, c.l., East Tampa, Fla., unit-ton. 1.00 - —
bulk, f.o.b. vessel at Fla unit-ton. 1.05 - —

Sweet birch oil, USP, northern, cns lb. 4.00 - 9.50

USP, southern, cns. lb. 2.00 - 3.05

T

2,4,5-T, dms., c.l., works, frt. equald. lb. 1.18 - —
dms., l.c.l., same basis lb. 1.25 - —

2,4,5-T, isopropyl ester, dms., c.l., works, frt. equald lb. 1.24 —
dms., l.c.l., works lb. 1.30 —

Talc, dom., fibrous, grd., bgs., c.l., works, New York ton.28.00 —
bgs., l.c.l., works ton.31.00 -36.00

fibrous, 99.5%, 325 mesh, bgs., c.l., works, New York ton.31.00 —
bgs., l.c.l., works ton.34.00 - —

Talc, dom., fibrous, 99.95%, 400 mesh, micronized, bgs., c.l works ton.38.00 - —
625 mesh, micronized, bgs., c.l., works ton.80.00 —

Talc, dom., ord., Calif., grd., bgs., c.l., works ton.34.00 -39.50
Vermont, off-color, grd., bgs., c.l., works ton.19.40 - —
bgs., l.c.l., works ton.37.00 - —

Imp., Canadian, grd., bgs., c.l., mines ton.20.00 -35.00

tanks, works lb. .02⅞- .03⅛

Tall oil, crude, tanks, works lb. .03 - .03¼
Dist., depending on grade, dms., c.l., works lb. .07 - .09¼
tanks, works lb. .05¼- .08

Tall oil, refd., depending upon grade, dms., c.l., works lb. .07¾- .08¼
tanks, works lb. .05¾- .07⅛

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Tall oil acids, dms., c.l., works lb. .07 - .10
dms., l.c.l., works lb. .07½- .10½
tanks, works lb. .05 - .07½
Tallow, edible, tanks, dlvd. lb. .10¾ —
Inedible, fancy, bleachable, tank lb. .06¾ —
fancy, guaranteed, bulk, f.o.b. steamer lb. .07¼ —
dms., f.a.s. lb. .08¼ —
tanks, dlvd. lb. .07 - —
No. 1, dlvd. lb. .05½ —
Prime, tanks, dlvd. lb. .06½ —
Special tanks, dlvd. lb. .06¼ —
Sulfonated, 25%, bbls., l.c.l. lb. .08½ - .08¾
50% bbls. l.c.l lb. .10½ .11
Tallow acids, dist., dms. lb. .12¼ - .14¾
tanks lb. .09¾ —
Hydrogenated, dms. lb. .14½ - .17
Tallow oil, acidless, dms. c.l. lb. .13½ —
dms., l.c.l lb. .14½ - .15½
Tangerine oil, Florida, dms lb 4.75 —
Tankage, animal, feeding, 9-11% ammonia, New York bulk unit-ton. 4.75 5.00
Tannic acid, NF, fluffy, bbls., 1,000-lb lots lb 2.05 —
bbls., smaller lots lb 2.06 2.07
NF, powd., bbls., 1,000-lb lots lb 1.95 —
bbls., smaller lots lb 1.96 1.99
Tech., dms lb 1.05 —
Tansy oil, dms lb 6.60 8.00
Tar acid oil, 15-18%, dms., c.l., dms., l.c.l., same basis gal. .55½ —
tanks, same basis gal. .43½ —
Tar acid oil, 25-28%, dms., c.l., same frt equald gal. .53½ —
basis gal. .60 —
dms., l.c.l., same basis gal. .62 - —
tanks, same basis gal. .50 - —
50-53%, dms, c.l., same basis gal. .75 - —
dms., l.c.l., same basis gal. .77 - —
tanks same basis gal .65 - —
Tar, coal (see Coaltar)
Tartar emetic (see Antimony potassium tartrate).
Tartaric acid, NF, 100-lb bgs., c.l., frt equald lb. .41 —
bgs, 10,000 lbs, 1 shipt., same basis lb. .43 - —
bgs, smaller lots, same basis lb. .47 - —
Terpine hydrate, NF, cryst., powd., 100-lb fib. dms lb. .70 —
Terpineol, extra, dms lb. .50 .60
Prime, dms lb .40 .50
Terpinyl acetate, extra, cns., dms. lb. .64 .75
Prime, dms lb .53 .56
Terpinyl propionate, dms lb. 1.65 1.70
Testosterone USP bots gram No prices
Testosterone propionate, USP bots gram No prices.
Tetrachloroethane, dms, works lb 14½ —
Tetrasodium pyrophosphate (see Sodium pyrophosphate)
Tetrachloroethylene, tech (see Perchloroethylene)
Tetrachloroethylene, USP, 55-gal. dms., c.l., t.l., works lb. .20½ —
dms, l.c.l., works lb .22 .23½
Tetraethyl orthosilicate, dms., c.l., dlvd E lb. .60 —
dms, l.c.l, dlvd E lb. .61½ —
Tetraethyl pyrophosphate, 40%, cns., dms., frt equald lb. .75 —
Tetraethylenepentamine, dms., c.l., dlvd E lb. .53½ - —
dms., l.c.l., dlvd E lb. .55 - —
tanks, dlvd E lb. .51 - —
Tetraethylthiuram disulfide, tech., dms., frt alld lb 1.04 —
Tetrahydrofuran, dms, c.l., t.l., works lb .36½ - —
dms., l.c.l., or t.l., works lb .37 - —
tanks, works lb .35 - —
Tetrahydrofurfuryl alcohol, dms., c.l., t.l., Memphis, Tenn. lb. .31½ —
dms., l.c.l., Memphis, Tenn lb .32½ —
dms., c.l., Newark, N.J. lb .33½ —
Tetrahydrofurfuryl alcohol, dms., l.c.l., Newark, N. J. lb. .34½ —
tanks, dlvd E, Denver lb .31 —
tanks, dlvd W of Denver lb .32 —
Tetrahydrophthalic anhydride dms., c.l. t.l. frt alld E lb .39 - —
l.c.l., t.l.l. same basis lb .41 - —
Tetrapotassium phosphate (see potassium phosphate)
Thallium metal, dlvd lb 7.50 - 10.00
Thallium sulfate, 99% bots, dlvd lb 5.00 10.00
Theobromine, NF, 6b dms, 100 lbs, f.o.b., works lb. 4.10 4.15
Theobromine and sodium acetate, USP, 6b dms, 500-lbs works lb 6.45 —
Theobromine, sodio-salicylate, NF, 6b dms., 500-lbs. works lb 3.80 - —
Theophylline, USP, anhyd, 100-lb dms., frt alld lb 3.65 - —
Thiamine hydrochloride, USP, 6b dms., frt alld kilo 38.00 - —
USP, ampule grade, 6b., dms., frt alld kilo 38.00 - —
Thiamine mononitrate, USP, 6b dms frt alld kilo 36.00 - —
Thiocarbanilide, dms., ton lots lb. 74 - —
dms., less ton lots lb. 76 - —
Thiodiphenylamine (see Phenothiazine)
Thioflavin green toner, brilliant, molybdated, PMA, kgs., works lb 5.20 - —
Tungstated, PTMA, kgs works lb 6.20 - —
Thioglycollic acid, refd., 55 gal dms., ton lots, 100% basis lb 1.15 - —
Thiosalicylic acid, 80%, dms., 1,000-lb., lots, works lb 4.00 - —
Thiourea, tech, bgs, t.l. frt alld. lb. .30 - —
bgs., ton lots, same basis lb .33 - —
bgs., less than ton lots, same basis lb .33 - —
Thorium nitrate, purif., 6b dms., 100-lb lots or more, works lb 3.50 - —
dl-Threonine, dms., 100 kilos, works kilo 121.00 —
Thyme leaves, French, triple sifted extra, bgs lb .27 - —
Spanish, extra, bgs lb. .12 - —
triple sifted, bgs lb .25 - —
Spanish, bgs. lb .09 - —
Thyme oil, NF, red, cns., dms. lb 2.00 - —
NF, white, cns lb 2.20 - —
Tech., white, cns lb .40 1.85
Thymol, 6b dms, 25-lbs., f.o.b. works lb 2.45 —
Thymol iodide, NF, dms, 100-lbs f.o.b. works lb. 7.30 —
Timbo root (see Cube root)
Tin chloride (see Stannous chloride anhyd.)
Tin crystals (see Stannous chloride, hydrous)
Tin metal (Straits) lb. 1.00 - —
Tin oxide (see Stannic oxide)
Tin sulfate (see Stannous sulfate)
Tin tetrachloride anhyd (see Stannic chloride, anhyd.)
Titanium dioxide, anatase, ceramic, bgs., c.l., dlvd lb. .25½ - —
bgs., l.c.l., dlvd lb .26½ - —
reg., bgs., c.l., dlvd lb .25½ - —
bgs, l.c.l, dlvd lb .26½ - —
metallurgical, nat., bgs., c.l., f.o.b. Jacksonville, Fla. ton 180.00 - —

Titanium dioxide, metallurgical, nat., bgs., 5-ton lots, Niagara Falls, N. Y. ton 205.00 - —
bgs, ton lots same basis ton 215.00 - —
Milled metallurgical titanium dioxide $7.50 per ton higher
Titanium dioxide, rutile, nonchalking, bgs., c.l., dlvd E lb. .27½ - —
bgs., l.c.l., dlvd E lb. .28½ - —
Titanium dioxide-calcium pigment, 30% $Ti O_2$, reg., bgs., c.l., dlvd lb. .09¾ - —
bgs., l.c.l., works lb. .09¾ - —
50% $Ti O_2$, high-tinting, dms., c.l., lb. .14⅜ - —
dms, l.c.l. lb. .14⅞ - —
Titanium hydride, powd., dms., works lb. 8.10 9.00
Titanium tetrachloride, tech., dms., c.l., works lb. .26 - —
dms., l.c.l., works lb. .27½ - .29
tanks, works lb. .20 - —
Tobias acid, dms., c.l., t.l. lb. .81 - —
dms., l.c.l. lb. .84 - —
d-a-Tocopherols, NF, mixer, conc., pure basis, bots kilo. 67.00 - —
d-a-Tocopheryl acetate, NF, conc., pure basis, bots kilo. 122.00 - —
d-a-Tocopheryl acid succinate, cryst., bots kilo. 109.00 - —
dl-a-Tocopherol, bots kilo. 99.00 - —
dl-a-Tocopheryl acetate, bots kilo. 90.00 - —
25% dry, powd, bots kilo. 22.50 - 24.00
33% dry, powd, bots. kilo. 30.00 - 31.50
o-Tolidine base, dry, kgs., 100% basis lb 1.55 —
Paste, kgs, 100% basis lb 1.50 —

TOLUOL
Toluol quotations, both coaltar and petroleum, may be found under Toluene.

o-Tolidine hydrochloride, paste, kgs., 100% basis lb 1.50 —
Tolu balsam, cns lb. 3.60 - 3.95
Toluene, coaltar, indust., or nitration, tanks, dlvd, E. of Rockies gal. .25½ - —
Toluene, petroleum, indust., tanks, f.o.b., frt. equald gal. .25 - —
p-Toluenesulfonamide, powd., dms., t.l., works lb. .60 - —
dms., t.l.l., same basis lb. .63 - —
Toluenesulfonic acid, 55-gal. dms., t.l., frt. alld lb .16 - —
1,000-lb or more, same basis lb. .18 - —
less than 1,000-lb., same basis lb. .23 - —
tanks, same basis lb. .14 - —
Toluenesulfonic acid in 10-gal, dms., 2c per lb more.
p-Toluenesulfonic acid, mononydrate, dms., c.l., or t.l lb. .90 - —
dms., 125 lbs. to t.l. lb. 1.00 - —
m-Toluidine, dms, c.l., works, frt. alld lb. .83 - —
dms., c.l., same basis lb. .84 - —
tanks, same basis lb. .82 - —
o-Toluidine, dms, c.l., works, frt. alld lb .30 - —
dms., c.l. same basis lb .31 - —
tanks, same basis lb. .28 - —
p-Toluidine, tech, flake, dms., frt. alld lb. .50 - —
Cast, dms, frt. alld lb. .45 - —
p-Toluidine-m-sulfonic acid, dms., works lb. .92 1.04
Toluidine red toner, deep shades, kgs., works lb. 1.70 - —
Light shades, kgs, works lb. 1.70 - —
1,4-Tolylenediamine, cryst., fib. dms., f.c.l., frt alld lb. 1.10 - —
Tonka beans, Angostura, cks. lb. 1.50 - —
Brazilian, Surinam, cs lb 1.30 - —
Totaquine, 100-oz lots, cns. oz. .42 - —
Toxaphene, dms, c.l. t.l., works. lb. .22 - —
dms, l.c.l. t.l.l. works lb .28 - —
Tragacanth gum, No. 1, ribbons, cs lb 4.10 4.20
No 2, cs. lb. 3.75 3.80
No. 3, cs. lb. 3.40 3.65
USP powd, bbls lb 1.05 1.15
Triacetin, dms., c.l., dlvd, E. of Rockies lb. .39 - —
dms., l.c.l., same basis lb. .40 - —
tanks, same basis lb. .37 - —
Triallylamine, dms., c.l., dlvd lb. .985 - —
dms., l.c.l., dlvd. lb. .995 - —
tanks, dlvd lb. .96 - —
Tributyl citrate, tech., non-ret. dms., c.l., frt alld E of Denver lb. .42½ - —
non-ret. dms., c.l.l., frt. alld, E. of Denver lb. .43½ - —
tanks, frt alld E of Denver lb. .40 - —
Tributyl phosphate, dms, c.l., works, lb. .52½ - —
dms, l.c.l., same basis lb. .53½ - —
tanks, same basis lb. .50 - —
Tributylamine, dms., c.l., works lb. .67½ - —
dms., l.c.l., same basis lb. .69 - —
tanks, same basis lb. .65 - —
Tributyrin, dms, c.l. dlvd lb .69 - —
Trichloroacetic acid, tech., 300-lb. dms, c.l., f.o.b. works lb. .52 - —
USP, 100-lb. dms., frt. equald lb. 1.25 - —
Trichlorobenzene, dms, c.l. frt. alld E lb. .15 - —
dms., l.c.l. frt alld E lb. .16 - —
tanks, frt, alld E lb 13¼ —
Trichlorobenzene prices in the West 1¾c. higher
1,1,1-Trichloroethane, dms., c.l., dlvd. lb. .13¼ —
dms., l.c.l., dlvd lb. .16 - —
tanks, dlvd lb. .12¼ - —
1,1,2-Trichloroethane, dms., c.l., works lb. .15½ - —
dms., l.c.l., works lb. .16¼ - —
tanks, works lb. .13½ - —
Trichloroethylene, dms, c.l., or t.l., dlvd lb. .12½ - —
dms., l.c.l., dlvd. lb. .14 - .14½
tanks, dlvd. lb. .11¼ - —
Trichloroisocyanuric acid, dms., c.l., t.l., frt equald lb. 65 - —
dms, l.c.l. same basis lb 75 - —
Trichlorophenoxyacetic acid (see 2,4,5-T).
Tricholine citrate, 65% soln., ret. chys, works, frt adjusted, lb. 1.40 1.45
Tricresyl phosphate, coaltar, dms., c.l., dlvd lb. .35 - —
dms., l.c.l., dlvd. lb. .36 - —
tanks, dlvd lb. .32½ - —
Tricresyl phosphate, petroleum, dms., c.l., dlvd lb. .35 - —
dms., l.c.l., dlvd. lb. .36 - —
tanks, dlvd lb. .32½ - —
Tridecyl alcohol, mixed isomers, dms, c.l. dlvd E lb. .26½ - —
dms., l.c.l., dlvd E lb. .28 - —
tanks, dlvd E lb. .24 - —
Triethanolamine, dms, c.l., dlvd E, lb. .24½ - —
dms., l.c.l., same basis lb. .26 - —
tanks, same basis lb. .22 - —
Triethanolamine lauryl sulfate, dms., c.l., t.l. frt alld lb. .25½ - —
dms, l.c.l., frt alld. lb. .26½ - —
tanks, frt alld lb. .24½ - —
Triethylamine, dms, c.l., dlvd E, lb. .50 - —
dms., l.c.l., same basis lb. .51½ - —
tanks, same basis lb. .47½ - —

Triethyl citrate, refd., tech., non-ret, dms., c.l., frt alld E of Denver lb. .46¼ - —
non-ret, dms., l.c.l., frt. alld, E. of Denver lb. .47¼ - —
tanks, frt. alld E of Denver, lb. .43¾ - —
Triethyl phosphate, dms., c.l., dlvd, lb. .40½ - —
dms., l.c.l., dlvd. lb. .42 - —
tanks, dlvd. lb. .38 - —
Triethylene glycol, dms., c.l., dlvd, E lb. .21 - —
dms., l.c.l., dlvd, E lb. .22½ - —
tanks, dlvd, E lb. .18½ - —
Triethylenetetramine, dms., c.l., dlvd, E lb. .51½ - —
dms., l.c.l., dlvd E lb. .53 - —
tanks, dlvd E lb. .49 - —
Triisobutylene, tanks, dlvd. lb. .08 - —
Tri-isopropanolamine, dms., c.l., dlvd, E lb. .23¼ - —
dms., l.c.l., dlvd E lb. .24¾ - —
tanks, dlvd E lb. .20¾ - —
Trimethylamine, anhyd., cyls., l.c.l., frt. equald, 100% basis lb. .30 - .305
tanks, frt equald 100% basis, lb. .26 - —
25-40% soln, dms, c.l., frt. equald, 100% basis lb. .35 - —
dms., l.c.l. frt equald, 100% basis lb. .35½ - —
tanks, 100% basis, frt equald lb. .36 - —
Trimethylolpropane, dms., c.l., t.l., dlvd, E lb. .30½ - —
dms., l.c.l., l.t.l., same basis lb. .31½ - —
Trioxanes, pure, dms, c.l., t.l., works lb. .50 - —
dms., l.c.l., works lb. .51½ - —
Tripentaerythritol, bgs., c.l., t.l., dlvd, E lb. .34 - —
bgs., l.c.l., l.t.l., dlvd, E lb. .35 - —
Triphenyl phosphate, bbls., c.l., frt. equald lb. .41½ - —
bbls, l.c.l, frt equald lb. .43½ - —
Triphenylguanidine, bbls, works lb. .90 - —
Tripropylene dms., c.l., dlvd E gal. .44 - —
dms., l.c.l., same basis gal. .54 - —
tanks, same basis gal. .28 - —
Tripropylene glycol, dms., c.l., t.l., frt alld E lb. .20½ - —
dms., l.c.l. t.l.l. frt alld E lb. .22 - —
tankcars and compartmented tankcars, frt alld E lb. .17½ - —
Tripropylene glycol, tankwagon and compartmented tankwagons, 1,000 gals min, frt, alld E lb. .18 - —
Tripropylene glycol prices 1c per lb. higher in west.
Trisodium phosphate (see Sodium phosphate tribasic)
dl-Tryptophane, dms., 1 kilo, works, kilo. 154.00 - —
Tung oil, dms., New York lb. .31½ - .32
tanks, imported lb. .29 - .30
tanks, domestic, mills lb. .29 Nom.
Tungsten metal powd, 2.0-2.5 microns, dms, works lb. 4.25 - —
Tungstic acid, tech, dms., 1,000-lb. lots, works lb 2.25 - —
dms., smaller lots, works lb 2.45 - —
Turkey red, bbls, works lb .62 - —
Turpentine, gum (see Protective Coatings market Naval Stores)
Turpentine oil, NF, cns, dms lb. .28 .50
Tuscan red, bbls, frt equald lb .26 .32
Tyrothricin, USP, 1 to 5 kilos, gram. .50 - —

U

Ultramarine blue, cobalt type, dry or pulp, 250-lb bbls., dlvd, E. of Rockies lb. .30½ - .35
Jobbing types, dry, bbls., same basis lb. .16 - .22½
Regular types, dry bbls, same basis lb. .16 - .37½
Ultramarine blue prices 1c higher W of Rockies.
Umber pigment, burnt, American, bgs., c.l., works lb. .07¼ - .07¾
bgs, l.c.l. works lb. .07¾ - .08
Umber pigment, burnt, turkey-type, bgs., c.l., Boston, Bethlehem, Easton, Pa., Hiwassee, Va., N. Y lb. .08¼ —
Raw, American, bgs., works lb. .07¼ - .08¼
Turkey-type, bgs, works lb. .08½ - .08¾
Undecylenic acid, 55-gal. dms., f.o.b. works lb. 1.28 - —
Unicorn root, false (see Helonias root).
Unicorn root, true (see Aletris root).
Urea, 46% N, indust, bgs., c.l., t.l., f.o.b. plant ton. 100.00 - —
bgs., l.c.l., f.o.b. plant ton. 120.00 - —
45% N, agricultural, bgs., c.l. f.o.b. plant ton. 98.00 - —
Urea-ammonia liquor A, B, C & F grades, N basis, tanks, frt. equald ton. 120.00 - —
37 grade, tanks, same basis ton. 145.00 - —
Urethane, USP, dms, t.l., f.o.b., works lb .65 - —
dms., l.t.l., same basis lb. .70 - —
Uva-ursi, leaves, bls lb. .12 - —

V

Valerian root, Belgian, bgs. lb. .32 - —
Indian, bgs lb .25 - —
dl-Valine, dms., 1 kilo, works kilo. 37.00 - —
Vanadium pentoxide, tech, dms, works lb. 1.38 - —
Vandyke brown, bbls, works lb. 09½ - .12
Vanilla beans, Bourbon, tins lb. 7.35 - 7.50
Mexican cuts, tins lb. 7.25 - 7.50
whole, tins lb. 7.75 - 8.50
Vanillin ex lignin, 100-lb fib. dms., 2,000-lb. lots or more lb. 3.00 - —
less than 2,000 lbs lb. 3.20 - 3.30
Venetian red, jobbing, bgs, works, lb. .0475- —
Venetian red, 20%, bgs., works lb. .0525- —
25%, bgs., works lb. .0575- —
30%, bgs., works lb. .06 - —
35%, bgs., works lb. .0625- —
40% bgs., works lb .0675- —
Vetiver oil, Bourbon, cns lb. 17.00 - 17.25
Haitian, cns. lb. 12.00 - 14.00
Victoria blue toner, molybdated, PMA 250-lb bbls., dlvd, E. of Rockies lb. 4.50 - 4.95
Tungstated, PTMA, 250-lb bbls., dlvd, E of Rockies lb 5.55 - —
Victoria blue toner, bbls., prices 1c higher W of Rockies
Vinyl acetate monomer, zone 1, 55-gal. dms., c.l., dlvd lb. .1810- —
55-gal dms., l.c.l., dlvd lb. .1960- —
tanks, dlvd. lb. .1560- —
tanktrucks less than 4,000 gal., dlvd lb. .1610- —
Vinyl n-butyl ether, tech, dms., l.c.l. works lb. .50 - —
Vinyl chloride monomer, tanks, works, min. frt. equald. E. lb. .0891- —
Vinyl ether, USP, anethesia, bots., 50cc., hospitals bot. 1.12 - —
bots. 75cc. hospitals bot 1.56 - —
Vinyl ethyl ether, tech., dms., c.l., works lb. .30¼ - —
dms., l.c.l., works lb. .31 - —
tanks, works lb. .28¼ - —
Vinyl propionate monomer, dms., c.l., dlvd lb. .49 - —
dms., l.c.l., same basis lb. .50 - —
tanks, same basis lb. .47 - —

Vinyl trichloride (see Trichloroethane).
2-Vinylpyridine, 10 dms. to tanks, works lb. 1.25 - —
1 to 9 dms., works lb. 1.35 - —
tanks, works lb. 1.15 - —
Vinyltoluene, dms., c.l., f.o.b., works, lb. .16½ - —
dms., l.c.l., same basis lb. .18½ - —
tanks, f.o.b dest, frt. prepaid lb. .14 - —
Viosterol in nat. vegetable oil, 1,000,000 D units per gram, bots., lots of 10 billion USP units 1,000,000 units. .02½ - —
Virginia type red, bbls., works lb. 1.40 - —
Vitiamin A acetate, syn., cryst., beads 500,000 A units per gram gram .07¼ - —
Vitamin A acetate dry, 500,000 units per gram, kilo lots kilo. 65.00 - —
325,000 units per gram, same basis kilo. 43.88 - —
250,000 units per gram, same basis kilo. 33.75 - —
Dry vitamin A acetate in less than kilo lots, $1.25 to $2.50 per kilo higher
Vitamin A, liq in oil, 1,000,000 A units per gram 1,000,000 units. .09½ - —
Vitamin A palmitate, liq., 1,000,000-1,800,000 A units per gram 1,000,000 units 09½ - —
Vitamin B_1 (see Thiamine hydrochloride).
Vitamin B_2 (see Riboflavin and Yeast).
Vitamin B_{12}, cryst., USP (cyanocobalamin) 1-50 grams, vials, tins gram. 45.00 - —
Vitamin B_{12}, 0.1% vitamin B_{12}, USP, adsorbed on gelatin, 100 and 500-gram bots on 1-5 kilo dms gram. 1.00 - —
Vitamin B_{12}, 0.1% vitamin B_{12}, USP, adsorbed on resin, 100 and 500-gram bots., 1-5 kilo dms., gram. 1.00 - —
Vitamin B_{12}, oral grade solids in containers of 1 and 10 gram of B^{12} activity gram. 52.00 - —
0.1% trituration of cryst., B_{12} with dicalcium phosphate or mannitol, 1-10 kilo. 52.00 - —
Vitamin B_{12} 0.1% cobalamin concentrate, NF adsorbed on resin 500-gram bots. 1-5 kilo, dms, frt alld gram. .90 - —
0.1% cobalamin concentrate in gelatin 1-10 kilo dms., frt alld gram .90 - —
Vitamin C (see Ascorbic acid).
Vitamin D, (see Codliver and Fishliver oils, Calciferol and Viosterol)
Vitamin D dry, 850,000 units per gram, kilo lots kilo. 42.50 - —
850,000 units per gram less than kilo lots kilo. 45.00 —
Vitamin E (see a-Tocopherol and Wheat germ oil)
Vitamin H (see Biotin)
Vitamin K, active (see Menadione).
Vitamin K_1, 25-gram lots gram. 4.50 —
Violet methyl toner (see Methyl violet toner).
VM&P naphtha (see Naphtha, VM&P, petroleum).

W

Wahoo root bark, bls. lb. 2.00 2.25
Warfarin 0.5% dms., 50-lb. lots, dlvd lb. 1.95 - —
dms, 25-49-lb. lots, New York or Chicago lb 2.05 - —
dms, 5-24-lb lots, New York or Chicago lb 2.15 - —
Watchung-type reds., bbls lb. 1.95 - —

WAXES
Wax quotations are listed individually. For example, prices on Wax, carnauba, may be found in the C's under Carnauba wax.

Wheat germ oil, 5-gal dms. gal. 12.25 —
White lead (see Lead, white).
White mineral oil (see Mineral oil, white).
White pine bark, rossed, bls. lb 21 - .23
White precipitate, USP, powd., dms., 100 lbs. f.o.b works lb. 5.50 - —
Whiting (see Calcium carbonate)
Wild cherry bark, thin, nat., bls lb. .30 - —
Wintergreen oil, USP, nat northern, cns lb 6.35 - 17.50
USP, nat southern, cns lb 3.75 7.00
Wintergreen oil, syn. (see Methyl salicylate).
Witch hazel bark, bls lb. .30 - .35
Witch hazel leaves, bls lb. .75 - .80
Wollastonite, fine paint grade, bgs., c.l., works ton. 41.00 - —
bgs., l.c.l., ex whse ton. 51.00 - —
Medium paint grade, bgs., c.l., works ton. 29.00 - —
bgs., l.c.l., ex whse. ton. 39.00 - —
Wood alcohol (see Methanol).
Wood oil (see Tung oil)
Woolfat crude (see Degras).
Woolfat USP (see Lanolin).
Wormseed, Levant, bgs lb 2.50 - —
Wormseed oil (see Chenopodium oil NF).
Wormwood oil, cns lb. 4.75 - —

X

Xylene, coaltar, indust., tanks, works:
Bethlehem, Pa. gal. .29 - —
Birmingham dist. gal. .29 - —
Chicago dist. gal. .28½ - —
Cleveland dist. gal. .29 - —
Xylene, coaltar, indus., tanks, works:
Geneva, Utah gal. .30 - —
Johnstown, Pa. gal. .29 - —
Lackawanna, N.Y. gal. .29½ - —
Lone Star, Tex. gal. .27 - —
Lorain, Ohio gal. .29 - —
Middletown, Ohio gal .30 - —
Xylene, coaltar, indust., tanks, works:
Minnequa, Col gal. .29 - —
Philadelphia dist. gal. .29 - —
Pittsburgh dist. gal. .29 - —
Sparrows Point, Md. gal. .29 - —
Terre Haute, Ind. gal .29 - —
Youngstown, Ohio gal. .29 - —
Xylene, petroleum, indust., tanks f.o.b works:
Bayonne, N. J. gal. .29 - —
Baytown, Tex. gal. .27 - —
Charleston, S. C. gal. .29 - —
Chicago, Ill gal. .28½ - —
Detroit, Mich., dlvd gal. .27½ - .29
Houston, Tex. gal. .27 - —
Philadelphia, Pa. gal. .29 - —
Providence, R. I. gal. .30 - —
Sewell's Point, Va. gal. .28 - —
Wood River, Ill gal. .28½ - —
m-Xylene, 95%, dms., c.l., f.o.b., Richmond, Calif lb. .21 - —
dms, t.c.l. f.o.b., Richmond, Calif lb. .22 - —
tanks, frt. alld. lb. .19 - —
o-Xylene, dms., c.l., works lb. .08 - —
dms, t.c.l. works lb. .09 - —
tanks, works lb. .06 - .06¼
p-Xylene, dms., c.l., works lb. .20 - —
dms., t.c.l., works lb. .21 - —
tanks, frt alld lb. .1645- —
Xylenol, cryst., 45°-47°C., m.p., dms., l.c.l., works, frt. equald lb. .23 - —
56°-58°C., m.p., dms., l.c.l., works, frt. equald lb. .33 - —

Xylenol, cryst., 60°-62°C., m.p., dms., i.c.l., same basis	lb.	.40	—
Xylenol fraction, b.r. 7°-9° C., dry above 227° C., dms., c.l., same basis	gal.	1.25	—
dms., i.c.l., same basis	gal.	1.30	—
tanks, same basis	gal.	1.05	—
b.r. 7°-9° C., dry at or below 227° C., dms., c.l., same basis	gal.	1.35	—
Xylenol fraction, b.r. 7°-9° C., dry at or below 227° C., dms., t.c.l., same basis	gal.	1.40	—
2,4-Xylidine, tech., dms., frt. alld.	lb.	1.18	—
2,5-Xylilline, tech., dms., frt. alld.	lb.	1.20	—
Xylidines, mixed, o-m-p, dms., c.l., or t.l., works	lb.	.39	—
dms., t.c.l., same basis	lb.	.40	—
tanks, same basis	lb.	.38	—

XYLOL
Xylol quotations, both coaltar and petroleum, may be found under Xylene.

Y

Yara yara oil, ens.	lb.	2.15	3.05
Yeast, brewers, debittered, USP XV, Saccharomyces, dlvd	lb.	.27	—
Yeast, brewers, primary, USP XV, 150 meg. B^1 per gram, 100-lb. dms	lb.	.47	—
USP XV, 270 mcg., B_1 per gram, 100-lb dms	lb.	.52	—
Yeast, brewers, primary, USP, XV, 300 mcg., B_1 per gram, 100-lb. dms	lb.	.56	—
USP XV, 900 mcg., B_1 per gram 100-lb. dms.	lb.	.60	—
Torula, USP dlvd.	lb.	.18	—

YELLOW PIGMENTS
Yellow pigment quotations are listed individually. For example, prices on Yellow, benzidine, may be found in the B's under Benzidine yellow

Yerba santa leaves, bls	lb.	.40	.45
Ylang-ylang oil Bourbon, bots	lb.	7.00	22.00
Ylang Ylang oil, Bourbon, extra bots	lb.	24.00	33.00
Yohimbine hydrochloride, bots., tins.	oz.	3.75	4.25

Z

Zein, bgs., 36,000-lb. lots or more, bgs. 500-lb. lots or more, dlvd	lb.	.343	—
bgs. smaller lots, dlvd	lb.	.373	—
Zinc acetate, NF, VIII, dms.	lb.	.53	—
Tech. dms., t.t.l., works	lb.	.29½	—
Zinc borate, bgs., 1,000 lbs or more, works	lb.	.25	—
bgs. less than 1,000 lbs., same basis	lb.	.27	—
Zinc chloride, NF, gran., dms	lb.	.42	—
NF, precip., powd., dms	lb.	.26	—
Tech., soln., 50%, dms., c.l., works 100 lbs.		5.80	—
dms., t.c.l., works 100 lbs.		6.40	—
tanks, works 100 lbs.		5.15	—
fused dms., c.l., works 100 lbs.		10.70	—
dms., t.c.l., works 100lbs.		11.20	—
gran., fib. dms., c.l., works. 100 lbs.		11.45	—
fib dms., t.c.l., works 100 lbs.		11.95	—
Zinc chromate bbls., dlvd.	lb.	.29	—
Basic bbls., dlvd.	lb.	.34	—
Zinc cyanide, dms., 1,000-lb. lots or more, works	lb.	.55	—
dms., smaller lots, works	lb.	.57	—
Zinc dust comi. bbls., c.l. works.	lb.	.16	—
Pigment, bbls., c.l., works	lb.	.15½	—
bbls., t.c.l., works	lb.	.17¼	—
Zinc fluoride, bbls., works	lb.	.49	.50
Zinc hydrosulfite, dms., c.l., frt. alld	lb.	.21½	—
dms., t.c.l., frt. alld.	lb.	.23½	—
Zinc metal, prime western, slabs, E. St. Louis	lb.	.12	Nom.
Prime western slabs, New York.	lb.	.12½	Nom.
Zinc naphthenate liq. 8% Zn., dms., frt. alld	lb.	.27	—
10% Zn., dms., frt. alld	lb.	.33	—
Zinc nitrate, tech., flake, 100-lb. fib. dms., t.c.l.	lb.	.16½	—
300-lb. fib. dms, t.c.l.	lb.	.14½	—
300-lb. fib. dms., c.l.	lb.	.14	—
Zinc oxide, pigment, American process, lead-free bgs. c.l., frt. alld	lb.	.12½	—
bgs., t.c.l., 10 tons or more, same basis	lb.	.13	—
bgs., t.c.l., smaller lots, same basis	lb.	.13½	—
Zinc oxide, leaded, 35% bgs., c.l., mills, frt. alld	lb.	.13⅜	—
bgs., t.c.l., 10 tons or more, same basis	lb.	.13⅜	—
50%, bgs., c.l., same basis	lb.	.13¼	—
pigment, American process, leaded, 50%, bgs., t.c.l., 10 tons or more, same basis.	lb.	.14½	—
French process, green seal, bgs., c.l., mills, frt. alld	lb.	.14½	—
bgs., t.c.l. 10 tons or more, same basis	lb.	.15¼	—
Zinc oxide, French process, green seal, bgs., t.c.l., smaller lots, same basis	lb.	.15¼	—
red seal, bgs. c.l. same basis.	lb.	.14½	—
Zinc oxide, French process, green seal, bgs., t.c.l., 10 tons or more, same basis	lb.	.15¼	—
bgs., t.c.l. smaller lots, same basis	lb.	.15¾	—
Zinc oxide, white seal, bgs., c.l., same basis	lb.	.14¾	—
bgs., t.c.l., 10 tons or more, same basis	lb.	.15½	—
bgs., t.c.l., smaller lots, same basis	lb.	.15¾	—
Zinc oxide, USP dms., c.l., frt. alld.	lb.	.16	—
dms., t.c.l., 10 tons or more, same basis	lb.	.16½	—
dms., t.c.l., smaller lots, same basis	lb.	.17	—
Zinc phenolsulfonate, NF, gran., dms	lb.	.45	.46
NF, powd., dms	lb.	.46	.48
Zinc resinate, precip. 7.2-7.6% Zn., dms., frt. alld	lb.	.45	—
Zinc silicofluoride dms. works	lb.	12¼	.14
Zinc stearate, USP, ctns., c.l.	lb.	.41	—
ctns., t.c.l.	lb.	.41	—
Zinc sulfate, powd., monohydrate, 35% Zn, bgs., c.l., dlvd.E.	100 lbs.	8.75	—
bgs., t.c.l., dlvd. E	100 lbs.	9.75	—
Zinc sulfate in bbls 40c higher.			
Zinc sulfide pure, bgs. c.l. dlvd	lb.	.2130	—
Zinc undecylenate, 75-lb. fib. dms., f.o.b. works	lb.	2.04	—
Zinc, yellow see Zinc chromate!			
Zinc-ammonium chloride, bgs., c.l., works	100 lbs.	10.25	—
bbls., c.l., works	100 lbs.	10.85	—
bbls., t.c.l., works	100 lbs.	11.35	—
Zinc-formaldehyde sulfoxylate, basic, 200-lb dms., frt. alld	lb.	.28	—
Normal, 250-lb. dms., frt. alld.	lb.	.26	—
Zircon (G) gran., bgs., c.l., works.	lb.	.03½	—
Zircon (G) gran., bgs., 5 tons to c.l., works	lb.	.03⅝	—
bgs., 1 ton to 9,999-lb. lots, works	lb.	.04	—
bgs., smaller lots, works	lb.	.04½	—
Zircon (G), milled, bgs., c.l., works.	lb.	.04⅛	—
bgs., 5 tons to c.l., works	lb.	.04⅜	—
bgs., 1 ton to 9,999-lb. lots, works	lb.	.04⅝	—
bgs., 500-1,999-lb. lots, works	lb.	.07½	—
Zircon (G) in barrels 1c. higher.			
Zirconium acetate soln., 13% ZrO_2, dms., c.l., 30,000 lbs. min., works	lb.	.23	—
Zirconium hydride, powd. electronic grade, dms., works	lb.	14.00	15.00
Zirconium oxide, CP, white, grd., bbls. or bgs., works	lb.	1.50	—
Electric-fused lump, bgs., 500 to 1,999-lb. lots, works	lb.	.48½	—
bgs., smaller lots, works	lb.	.51	—
milled, bgs., c.l., works	lb.	.62	—
bgs., 5-ton lots, works	lb.	.62½	—
bgs., 1-ton to 9,999-lb. lots, works	lb.	.63½	—
bgs., 500 to 1,999-lb. lots, works	lb.	.64	—
bgs., smaller lots, works	lb.	.66	—
Glass polishing grade, 94-97% ZrO_2, bgs., works	lb.	.55	.65
Opacifier grade, 85-90% ZrO_2, bgs.,	lb.	.27	.50
Stabilized oxide, 91% ZrO_2, milled, bgs	lb.	.62	.85
Zirconium oxychloride, cryst., ctns., 5-ton lots, works	lb.	.37½	—

Nalorphine Preparations Set for Narcotic Exemption

Bureau of Narcotics is planning to exempt pharmaceutical preparations containing nalorphine or any of its salts from the strict control regulations applicable to habit-forming narcotics.

A notice issued by the agency last week stated that an advisory committee recommends that a ruling be issued to the effect that such pharmaceutical preparations do not possess addiction-forming or addiction-sustaining liabilities sufficient to warrant imposition of all the requirements of the federal narcotic laws.

It is proposed at the same time that such preparations be designated as Class M products subject to only a minimum of regulation. Interested persons are invited to submit comments on the proposal to the commissioner by March 6.

DuPont Slates Big Boost In 'Lycra' Fiber Capacity

E. I. duPont de Nemours & Co. has made plans for a six-fold increase in production facilities for "Lycra" spandex fiber at its Waynesboro, Va., plant. The expansion will get under way immediately with completion scheduled for sometime next year.

"Lycra," duPont's newest textile fiber, was introduced to the textile trade for evaluation in April 1958 and went into commercial production at Waynesboro last year.

Since that time, duPont says, demand has been outstripping production, necessitating this expansion.

Yellow Prussiate of Soda Granted Additive Clearance

Yellow prussiate of soda (sodium ferrocyanide decahydrate) has been cleared for use in foods under the food additives law by Food & Drug Administration. The petition for clearance had been filed by International Salt Company, New York.

The regulation provides for use of the chemical as an anti-caking agent in sodium chloride and limits the amount for such use to not more than five parts per million of the finished product.

The product must be labeled as containing yellow prussiate of soda or sodium ferrocyanide decahydrate, together with a statement of the concentration in the finished product.

HOW HERCULES HELPS...

MAKE RUGGED LUGGAGE—Described by Sears, Roebuck and Co. as "the greatest step forward in luggage since leather," this new "Forecast" line based on Pro-fax®, Hercules polypropylene, is rugged, rich looking and virtually immune to staining. Distributed exclusively by Sears through its catalogues and 740 retail stores, "Forecast" luggage has been selected as a Diamond Jubilee Item for the company's 75th anniversary year.

PRODUCE HEALTHIER LIVESTOCK—Delnav® miticide, a development of Hercules' agricultural chemicals research, gives beef cattle, hogs, goats and sheep long-lasting protection from ticks and many other insect pests. Spray or dipping formulations based on Delnav require no waiting period between treatment and slaughter and avoid problems of excessive residues.

HERCULES POWDER COMPANY
INCORPORATED
Hercules Tower, 910 Market Street, Wilmington 99, Delaware

CHEMICAL MATERIALS FOR INDUSTRY

HERCULES

661-2

Phosphorus Producers Add New Capacity Cautiously With 1965 in Mind

OPD 'Depth' Report on Elemental Phosphorus

—*Continued from page 3*

in order to beef up phosphorus pentoxide content in fertilizers.

Ford Motor Company, Colorado Fuel & Iron Corporation, Shell Chemical Company and Kaiser Steel Corporation all have diammonium phosphate plants which consume elemental phosphorus for high-analysis DAP, as does TVA's plant at Wilson Dam.

Lately, TVA and Central Farmers have been producing calcium metaphosphate, made by reacting phosphorus directly with phosphate rock. TVA has also developed superphosphoric acid, which in turn goes into a 54 percent superphosphate.

Monsanto Chemical Company recently brought on stream a superphosphoric acid plant at Addyston, Ohio, and Victor Chemical is offering superphosphoric from a new plant in Chicago.

TVA is still pushing ahead in trying to get P_2O_5 content of fertilizers increased. The latest development: ammonium polyphosphate, with a typical analysis of fifteen parts nitrogen and sixty-two parts P_2O_5 (15-62-0).

TVA Can't Make Them Move

However, while TVA has done all it could to interest fertilizer manufacturers in the benefits of elemental phosphorus-derived materials, the phosphorus produres themselves retain a cautious attitude.

Time was when it looked like wet- process phosphoric acid was on the way out because of its relative impurity compared with furnace acid. It was harder to work with, and fertilizer analyses were low.

However, technology has improved vastly over the past several years. Result: Output of wet-process phosphoric increased 47 percent between 1955 and 1959, compared with a 37 percent increase for furnace acid.

In 1955, there were nineteen furnace acid plants in operation, and, right now, twenty-four with a combined capacity (by 1962) of 472,000 tons of P.

During the same period, wet-process phosphoric plants rose in number from twenty-five plants to twenty-nine plants. During 1955-1960, seven new companies got into the business.

Typical of most recent expansion plans: National Phosphate Company is building a 100,000-ton-a-year wet-process phosphoric acid plant at Marseilles, Ill., slated to go on stream before the fertilizer season.

Not far away, Allied Chemical Corporation's General Chemical Division is building a wet-acid plant at East St. Louis, Ill., to go on stream about the same time. Capacity will be about 50,000 tons a year.

Allied, National Phosphate

The Allied and National Phosphate expansions are only part of a drive by wet-process producers to boost their capacity some 46 percent during the year to 1,966,400 tons P_2O_5 per year.

Hence, the combination of technology improvements and pell-mell expansions by the wet-process acid producers tend to make the furnace acid industry more than cautious about more widespread penetration of the fertilizer mart.

What will happen to the price? they want to know. Further, with better acid from the wet process, what will happen in the liquid fertilizer field, where high-purity acid is a must in order to keep distributing equipment from clogging?

The furnace acid producers may have technologized themselves out of a lucrative liquid fertilizer market for regular high-purity acid when they began to produce the TVA-developed superphosphoric.

It seems that superphosphoric, along with its high analysis, has excellent sequestrant properties. This means that miniscule amounts of it can be added to lower-grade wet-process phosphoric to keep precipitants from clogging spray nozzles.

Chiefly because of anticipated stiff competition from wet-process phosphoric acid, elemental phosphorus producers (who, incidentally, are the only producers of furnace material) are not too optimistic about active growth in the fertilizer field—at least they don't expect a rate of expansion as rapid as that during the last several years.

STPP PRODUCTION

1965	*799,000 tons
1961	*663,000 tons
1960	*638,500 tons
1959	674,700 tons
1958	632,577 tons
1957	628,174 tons
1956	687,215 tons
1955	556,337 tons
1954	520,549 tons

*Estimate

Source: Bureau of Census

PHOSPHORUS CAPACITY KEEPS GROWING

Producers Add Carefully to Their Installations

Producer	Location	Furnaces 1/1/62	Capacity 1/1/62	1/1/61	1/1/60
AAC	Pierce, Fla.	3	30,000 tons	30,000 tons	13,000 tons
Central Farmers	Georgetown, Idaho	1	21,000 tons	21,000 tons	21,000 tons
FMC	Pocatello, Idaho	4	75,000 tons	75,000 tons	75,000 tons
Hooker	Niagara Falls, N.Y.	1	6,000 tons	6,000 tons	6,000 tons
Hooker	Columbia, Tenn.	3	68,500 tons	45,000 tons	45,000 tons
Monsanto	Monsanto, Tenn.	6	110,000 tons	110,000 tons	85,000 tons
Monsanto	Soda Springs, Idaho	2	40,000 tons	40,000 tons	30,000 tons
TVA	Wilson Dam, Ala.	5	36,000 tons	36,000 tons	36,000 tons
Victor	Mt. Pleasant, Tenn.	5	80,000 tons	80,000 tons	60,000 tons
Victor	Tarpon Springs, Fla.	1	12,500 tons	12,500 tons	12,500 tons
Victor	Silver Bow, Mont.	2	30,000 tons	30,000 tons	30,000 tons
V-C	Charleston, S. C.	1	8,000 tons	8,000 tons	8,000 tons
V-C	Nichols, Fla.	1	6,000 tons	6,000 tons	6,000 tons
Total		35	523,000 tons	499,500 tons	427,500 tons

Another key to producers' caution concerning expansion is sodium tripolyphosphate. Traditionally the largest single use for elemental phosphorus, tripoly has accounted for 36-39 percent of total output.

Growth was fantastic during the period 1950-1960, with tripoly's consumption of phosphorus almost tripling as synthetic detergents replaced soaps in the detergent field.

But now the consensus among phosphorus producers it that tripoly has about had it, as far as growth is concerned. Both the industry and detergent producers see little more than a population-rate type of increase for tripoly consumption for the next five years.

Two spectres loom on the horizon: One is possible increased production of detergent phosphates from wet-process acid; the other, replacement of sodium tripoly by tetrapotassium pyrophosphate should there be any large-scale swing to heavy-duty liquid detergents.

Cleaning Up Phosphoric Acid

Regarding the first, Blockson Chemical Division of Olin Mathieson Chemical Corporation and General Chemical Division of Allied are the only two producers who now have enough know-how to clean up phosphoric acid to the purity required for industrial phosphate manufacture.

The phosphorus-based phosphate producers hope that Blockson and General will continue to be the only two competitors, but there's always the possibility that someone else will be able to clean up acid enough to make detergent-grade chemicals.

Over the near term, however, it's believed that while techniques of purification are understood by wet-process acid makers, making them work is a different thing altogether.

Then, too, assuming know-how is accomplished, economics must be considered. based detergents, but in the specialty household cleaning field occupied by "Mr. Clean," "Handy Andy" and similar products.

In the last analysis, one phosphorus industry spokesman points out, it's largely dependent on promotional programs of the soapers as to what detergents are going to be popular in the future.

Phosphorus producers are confident of TKPP's growth, however. One source estimates consumption this year will be 30,000-32,000 tons; in 1965, the forecast is for consumption of more than 60,000 tons.

During the same period, sodium tripoly and other sodium phosphate detergent chemicals are expected to grow at a much slower rate with estimates running anywhere from a dismal 1.7 percent a year to about 3.8 percent per annum.

Non-Fertilizer Calcium Phosphates

Non-fertilizer calcium phosphates—those used for stockfeed, food and other industrial applications—are expected to have a better growth potential than tripoly.

Right now, it's estimated that somewhat less than half the annual production of dicalcium phosphate is made from elemental phosphorus. This position is expected to continue relatively unchanged.

Increased emphasis on animal nutrition, as well as larger-scale use of mono- and tricalcium phosphates, is likely to swell general calcium phosphate consumption by something a shade under 4 percent a year—at least for the next five years—industry onlookers believe.

Where the industry is basing its hopes for large-volume, broad-scale advances chiefly on the existing acid-type uses for phosphorus, there is a strong feeling that the future of the whole market will hinge mainly on non-acid use developments, particularly organic phosphorus compounds.

Phosphorus oxychloride is used to manufacture phosphate plasticizers such as tricresyl, triphenyl and cresyl diphenyl phosphates. In 1959 (latest year for complete figures), production amounted to 31.4 million pounds of TCP, 10.5 million pounds of cresyl diphenyl and 8.4 million of TPP.

For manufacture of these and other compounds, a total of 21,080 tons of phosphorus oxychloride were produced in 1959. By 1965, producers feel, demand might rise close to the 25,000-ton level.

Phosphorus pentasulfide figures most heavily in the lube oil additive field, but increased activity in phosphorothioate insecticides promises to boost sales during the next few years.

Phosphorothioates such as parathion, malathion, "Diazinon" and "Guthion" are becoming increasingly popular in widespread economic pest control at the expense of such old standbys as DDT and BHC because of the build-up of insect resistance to chlorinated hydrocarbon insecticides.

Aside from manufacture of thiophosphoric acid and esters, pentasulfide goes into mercaptans, intermediates for flotation agents and it is used as a catalyst.

Demand for phosphorus pentoxide (around 12,000 tons in 1960) is expected to rise based on P_2O_5's ability as a drying agent for air and gases.

The anhydride is reportedly used in the manufacture of methyl methacrylate resins and in other phosphates. Phosphorus metal itself has some non-chemical uses which might jump considerably in volume in the near future.

Yellow phosphorus is used as an intermetallic in semi-conductors for high-temperature electronic systems. Other electrical applications include use in electroluminescent coatings and as dope for transistor devices.

Sizable amounts are used by the metals industry. Phosphor-bronze bearings and gears last longer than items made from bronze alone. Metallic phosphorus is used to impart hardness to copper and tin as well, and is consumed in the manufacture of metallic phosphides.

M&T's Triphenylphosphorus

An example of one of the newer developments in organophosphorus chemistry is the commercial availability of triphenylphosphorus from Metal & Thermit Corporation.

M&T suggests that its compound, now freely available, will "renew interest in the Wittig reaction conversion of complex aldehydes or ketones to olefins."

Interest is also being generated—on a laboratory scale, to be sure—in such compounds as the boron phosphides, along with other phosphorus-containing materials suitable for high-temperature applications in the space age.

Whatever happens to the overall growth-rate of elemental phosphorus—and most observers believe it will be somewhat less than 4 percent a year—the in-

—*Continued on page 37*

Heavy Chemicals

Zinc production continues to outstrip demand, auguring ill for prices. Starting the year with stocks of 190,810 tons, US smelters turned out 77,373 tons of the metal during January but shipped only 55,331 in this country, which together with overseas shipments of 6,480 made for a total consumption of just 61,811 tons, causing stocks to rise to 206,372 tons, the highest level since 1946. This, according to American Zinc Institute figures, was the fifth consecutive month during which consumption failed to keep pace with output.

Prices of sodium tripolyphosphate are about as low as they can get, one trade source said last week, referring to the sharp reduction posted last October and indicating that narrowed profit margins should happily forestall any shading for extra business when soapers come into the market for seasonal needs.

Better situated, sodium sulfate is most likely to be in tight supply, if not on allocation, when the soap season moves into full swing. The material is rated firm at its higher price, vintage late 1960.

East coast shading of several major acids has shown no change, but sulfuric has been plighted a promise of firmness by the recent $2 advance in sulfur, an advance which should be effective on most contracts by mid-Summer. Phosphoric producers have been meeting a shaded price at N. Claremont for about eight months according to trade advices, and hydrochloric remains stymied by shaded byproduct muriatic and Pittsburgh's semi-capacity production pace.

Paper output is falling shy of last year's record-setting pace, but the industry's performance, when measured against the prevailing economic downturn, leaves alkali makers scant cause for complaint, as witness the following figures:

The American Paper and Pulp Association reported production for the week ended Feb. 4, at 91.4 percent of theoretical capacity, as compared with the revised figure of 89.9 percent for the previous week and 97.8 percent for the corresponding week of last year.

Price Trends

Advanced
None

Reduced
Mercury, $1 per flk.

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Feb. 12, 1960
106.84	106.84	106.85	106.82

For Current Prices see Page 10

Acids

Hydrochloric—Prices remain as previously, under competitive duress on the east coast, apparently steady at list elsewhere, trade sources reported. Hydrochloric makers supplying the steel industry have felt the anguish of a semi-idled Pittsburgh, but others, whose outlets lie in food-processing, oil well treating and chemicals, are faring better, it was reported.

Nitric—Except for the captive volume going into fertilizer production, nitric acid is reported less active than usual for this time of the year.

Phosphoric—Prices in the east have been shaded to a level of $1.36 per unit of acid for about the past eight months. No further weakness has been reported and list prices are said to prevail elsewhere in the country. Competition for available business is quite brisk, trade sources say, highlighted by a skirmish between phosphorus and the acid for chemical processing accounts.

Sulfuric—The higher tab on sulfur is likely to affect most contracts by midsummer, if the expectations of one sulfur producer prove valid for the whole industry.

If this should concur with an upturn in the economy, particularly in steel, sulfuric acid prices should strengthen, at least by a return to list levels, observers said.

Steel production during the week ending February 4 was reported by American Iron & Steel Institute at 1,492,000 net tons, up slightly from the previous week's 1,466,000 tons.

Bases and Salts

Aluminum Sulfate—Paper production has declined slightly from the near capacity level prevailing at this time last year, but the loss is rated insignificant when viewed against the downturn in other areas of the economy. As a result aluminum sulfate makers find themselves fairly well situated.

Borax—Automobiles and construction, two major borax outlets, are stuck in the doldrums these days and while the construction picture stands a good chance of improving, observers say, recovery in Detroit is likely to prove more difficult, with stocks at an all-time high and sales way shy of the mark.

Caustic Soda—Glass, paper and chemicals have been active enough to keep this material in good form despite the gathering forces of recession, a trade source said.

Copper Sulfate—Stocks of copper sulfate at domestic plants rose to 4,800 tons at the end of November, an increase of 30 percent over October and the largest since May, 1959, according to the Bureau of Mines.

At the November rate of shipments, inventories were sufficient for slightly over one month's needs.

Production gained 3 percent, totaling 5,552 tons, which was 1,100 tons greater than shipments of 4,444 tons, Mines notes. Shipments were down 16 percent from the October total of 5,264 tons.

There were no imports in November; exports totaled 50 tons, the lowest since September, 1959, the agency points out.

Fluoborates—Prices were recently advanced to reflect higher fluoboric acid-copper fluoborate by one cent; lead and tin by two cents, and iron and nickel fluoborates by three cents a pound.

Sodium Tripolyphosphate—Prices are about as low as they can get, one trade source said last week, referring to the sharp reduction posted last October. With soapers about to step into the market to take care of heavy seasonal requirements, it was held that narrowed profit margins would probably rule out shading for extra business.

Material in bulk is quoted at $147 a ton, and bag carlots at $158.

Sulfur—Some additional light has been shed on the recent price advance, helping to clear up the question of when the boost will become effective.

Most of the large tonnage business in this market is done on contract, a fact which led some observers to question the efficacy of a price advance which could have an immediate impact only on new business—which is rare in sulfur.

Now an official of the firm initiating the advance says that the firm expects that by July all of its contracts will be at the new prices. If the company's contracts are typical, and chances are as they are, the strengthening of sulfur prices will become a reality sooner than many anticipated.

Nonferrous Metals

Aluminum—Output of primary aluminum in the US in October totaled 167,015 short tons, an increase of 4,000 tons over September, according to the Mines Bureau.

Shipments during the month declined by 4,275 tons and with the increased production in October, stocks at producers' plants rose to 248,440 tons, a new high for the industry, Mines notes.

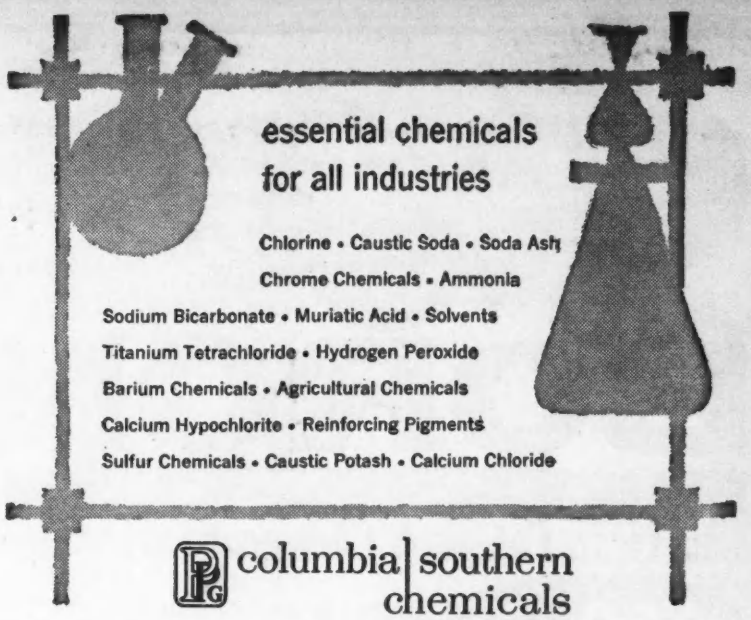
Chrominum—Consumption of chromite in November dropped 10 percent to 69,710 tons, the Bureau of Mines reports.

In producing 15,068 tons of chrominum ferroalloys, industry consumed 32,490 tons of chromite, averaging 46.7 percent Cr_2O_3, Mines notes. Consumption of chemical grade ore totaled 5,728 tons.

Chromite consumed in producing refractories amounted to 23,662 tons, while about 609 tons went into furnace repairs. In producing 8,808 short tons of chemicals (sodium bichromate equivalent), 12,065 tons of chromite were consumed.

Stocks of chemicals on hand at producers' plants at the end of November totaled 20,586 tons (sodium bichromate equivalent).

Copper — Consumption of purchased copper-base scrap in the US in November totaled 82,600 tons, down 18 percent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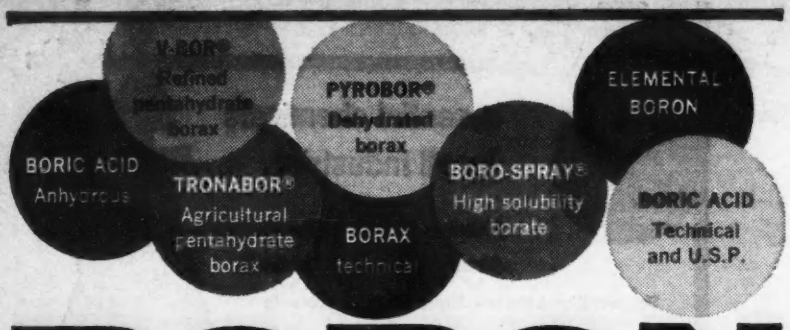

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Heavy Chemicals

from the previous month, and the lowest since July, the Bureau of Mines reports.

At the vanguard of the drop were primary producers, whose consumption dropped 23 percent, followed by brass mills with a 17-percent drop and secondary smelters whose consumption was off 12 percent.

Brass ingot production by secondary smelters dropped 8 percent and output of refined copper decreased 16 percent. Output of brass-mill products fell 17 percent and production of refined copper from secondary materials by primary producers declined 20 percent, Mines goes on to note.

Stocks of copper-base scrap fell from 148,000 to 146,700 tons. Inventories dropped 2 percent at secondary smelters and 1 percent at primary producers, and were almost unchanged at brass mills.

Prices paid in New York for No. 1 and No. 2 scrap were 22 and 20 cents per pound, respectively at the beginning of the month, and closed unchanged. Composition solids were also quoted unchanged at 15¾c., as was No. 115 brass ingot at 28¼c. per pound.

Mercury — Prices were reduced to a range of $208-$211 a flask, large lots, prompt shipment, as business continued to lag.

Price held steady at its still prevailing level of 91⅜c. a troy ounce, the dealer points out.

Tin—Straits metal was unchanged after its decline of a week ago, closing at $1 a pound, spot.

Zinc—Starting the year with stocks of 190,810 tons, US zinc smelters turned out 77,373 tons of the metal during January but shipped only 55,331 domestically, which together wtih foreign shipments of 6,480 made for a total consumption of 61,811 tons, causing stocks to rise to 206,372 tons, the highest level since 1946.

A closer look at American Zinc Institute records reveals that January was the fifth month in a row in which production outstripped shipments, and that the trend has been reversed in only three out of the last thirteen months.

The January production total breaks down as follows, with December figures shown for comparison:

- Special high grade, 33,904 tons, as against 30,262 tons in December.
- High grade, 5,176 tons, as against 4,247.
- Intermediate, 736 tons, as against 1,857.
- Prime western (including select and brass special), 37,557 tons, as against 36,567.

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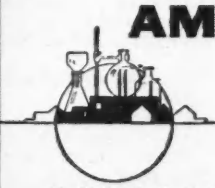

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Phosphorus Producers

OPD 'Depth' Report

—*Continued from page 34*

dustry will continue to consume vast quantities of raw materials.

In 1962, consumption of phosphate rock will increase to nearly 5.8 million tons, compared with 4.2 million tons in 1959. Coke consumption will rise to 777,000 tons from 564,500 tons during the same period.

Power consumption by phosphorus furnaces, which was rated at 4.9 billion kilowatt hours in 1959, will go up to an estimated 5.75 billion kwh. in 1962.

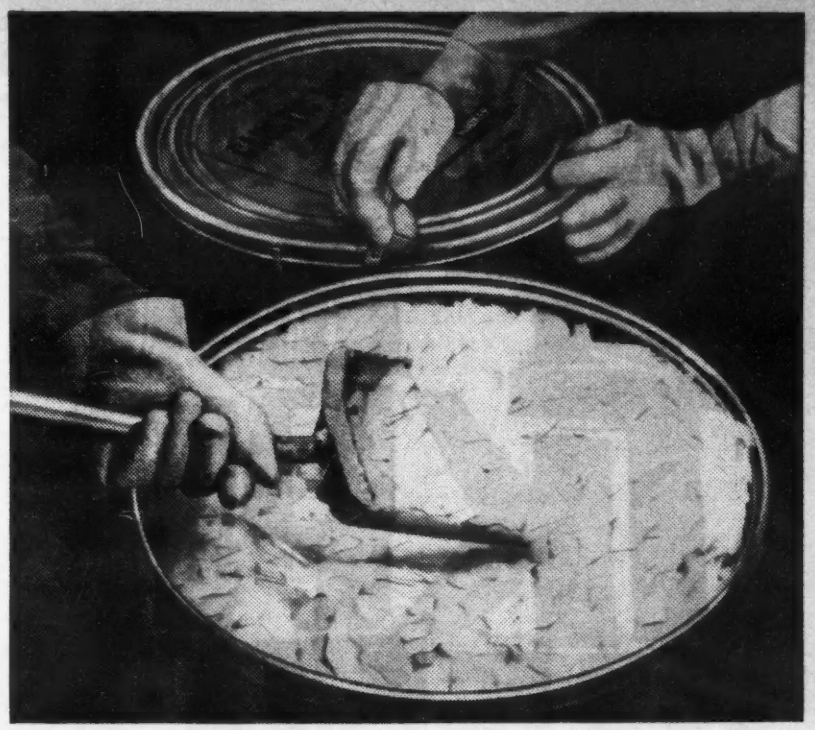
Elemental Phosphorus Reprints

OPD's special "depth" report on elemental phosphorus is being reprinted and will be available shortly. Copies may be obtained at 35 cents each (discounts on quantities of a hundred) from OIL, PAINT AND DRUG REPORTER's Reprint Department, 30 Church Street, New York 7.

Imports of elemental phosphorus, a possible threat over the long term, do not seem to frighten US producers. Some material has been shipped in from Electric Reduction, Ltd., in Canada, during the last couple of years to cover spot shortages of phosphate chemical producers here.

Current expansion in the domestic industry is expected to end this arrangement by next year, however. Though Canada, West Germany, Japan and the United Kingdom are among possible future suppliers of phosphorus, production economics apparently are better in the US than anywhere else in the free world—at least at present.

Chief problems for the future are not expected to come from outside. Rather they are likely to arise within the phosphate industry itself, where wet-process acid will probably make itself felt more keenly, both in agriculture and in the industrial field, due to advancing technology and lower price brought about by a large bulge in capacity.



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OPD Reports

British Leading Parade

—Continued from page 5

compound screening program in the US. Most of these drugs, however, have not found their way into use with patients, undesirable side-effects being a major problem.

Early last December, Humphreys & Glasgow sent representatives to East Germany to discuss the "know-how" exchange agreement. The company says the agreement covers all the main chemical processes of the East German chemical industry. And the engineering firm also will make available certain Western processes to the East Germans.

Humphreys & Glasgow officials report, though, that they have no firm ideas yet about which East German processes can first be used commercially in the West.

The first engineering teams from the London office of the company will leave for East Germany shortly to make detailed investigations of the chemical processes developed by the Communist industry.

The company describes the agreement as a kind of "hunting license" covering the whole technology. It also stresses the "two-way" part of the agreement.

Home of Big Farben Units

East Germany includes the area in which the pre-war IG Farben combine had its largest and most modern units. The East German state chemical industry is built on what remained of these production plants and laboratories after Russian reparations seizures of industrial equipment.

Two-way trade between East Germany and West Germany in chemicals has been a feature of the post-war period.

ICI officials report that actual negotiations on licenses for Soviet chemical processes have not yet been started. Last fall, ICI disclosed it was interested in a number of Russian processes, citing as one particular instance a caprolactam process.

The company says its engineers are still checking the caprolactam process to see if it offers technical or economic advantages over the processes currently used by ICI in this field.

Courtaulds, Ltd., big chemical and fiber producer, is ICI's competitor in caprolactam in Britain. In ordinary nylon, ICI and Courtaulds jointly own British Nylon Spinners which produces fiber from ICI raw materials.

CIA Panel Set to Discuss Small Business Opportunities

"Positive Thinking in Small Business" will be the topic of a panel discussion at the next regular dinner meeting of the Chemical Industry Association, to be held next Monday (February 20) at the Chemists' Club, New York.

Richard S. Mooney of Richard Mooney Associates will act as panel moderator. Philip Meisel, general manager of Abbey Chemical Company, Edison, N. J., will discuss financial structure, corporate know-how and research for the small business operator.

George M. Stephenson of Miller-Stephenson Chemical Company, South Norwalk, Conn., will cover the sales organization technical service, distribution and credit policies that make a small business successful. Robert S. First of Robert S. First, Inc., New York, will describe industrial consulting as a small business venture.

USSR Has 'Delrin' Process, Slates Semi-Commercial Plant

The Soviet Union has devised a method of producing polyformaldehyde from natural gas and has completed the design for the first semi-industrial installation for production of this plastic.

Success in obtaining stable polyformaldehyde was reported by the Institutes of Petrochemical Synthesis and Chemical Physics. The new facility has been slated by these two organizations in collaboration with the Kuskovo Chemical Plant.

Polyformaldehyde is produced in the US as "Delrin" by E. I. duPont de Nemours & Co., Wilmington, Del.

Tinsley Still a SAACI Member

Reporting on the change of presidents in the Salesmen's Association of the American Chemical Industry, OPD in its last issue erroneously stated that Preston F. Tinsley has resigned from the organization. Although he has stepped down from the SAACI presidency, Mr. Tinsley informs us that he intends to continue his membership in the association.

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Styrene Eyes Growth Future; It Looks Good

—Continued from page 3

without resorting to expensive and time-consuming development or acquisition plans," the Koppers executive pointed out.

Therefore, he said, these producers will probably "resort to the maneuver of making 'deals' for large blocks of sales."

This pressure on styrene, Mr. Eynon went on, will probably be passed on to benzene makers. In view of an anticipated over-supply of benzene, this should lead to "some competitive pricing."

In a breakdown on styrene growth prospects, Mr. Eynon had this to say:

- Use of styrene in conventional synthetic rubber has just about doubled in the period 1950-1960, inclusive. The most important new development is polyisoprene, but this is more likely to displace natural rubber than S-B rubber. Gasoline and diesel truck fuel sales will be the best barometer of styrene demand in synthetic rubber.
- The future of polystyrene looks good, but it is subject to the hazard of technical obsolescence. The switch from steel to plastics is likely to be slowed down because further price cutting in polystyrene is impractical, and the "steel industry is certainly aware of competition."

"Altogether, the use of styrene in polystyrenes should increase at a steady rate for several more years and until a better and cheaper plastic appears on the market."

- Water-based paints, though growing less vigorously in the past few years, still form an expanding market. In addition, styrene latex coatings for paper, for rug backing and some other special uses suggest a growth pattern of 3 to 5 percent a year.
- Polyester fiber glass products have more than doubled in the last five years, and "it is reasonable to expect the volume to continue to grow."
- Specialty items—such as ion exchange resins, styrenated unsaturated oils, antioxidants—will find expanding markets in the US, but overseas consumption is expected to contract sharply with the start-up of many local styrene plants now under construction.

Ethylene Production

—Continued from page 3

Gulf Coast refineries, where plans are being made for added production capacity.

News of Enjay's expansion comes shortly after Monsanto Chemical Company announced (OPD, 1/9/61) that it plans to build a 500 million-pound ethylene plant at Chocolate Bayou, Tex. This will be part of a giant hydrocarbon raw materials complex for the St. Louis, Mo., company.

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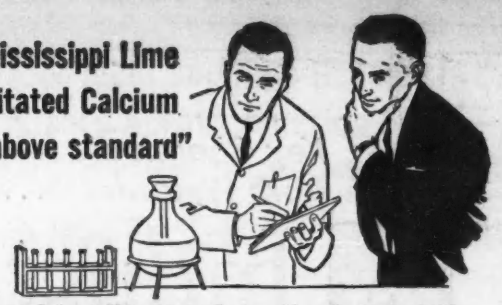

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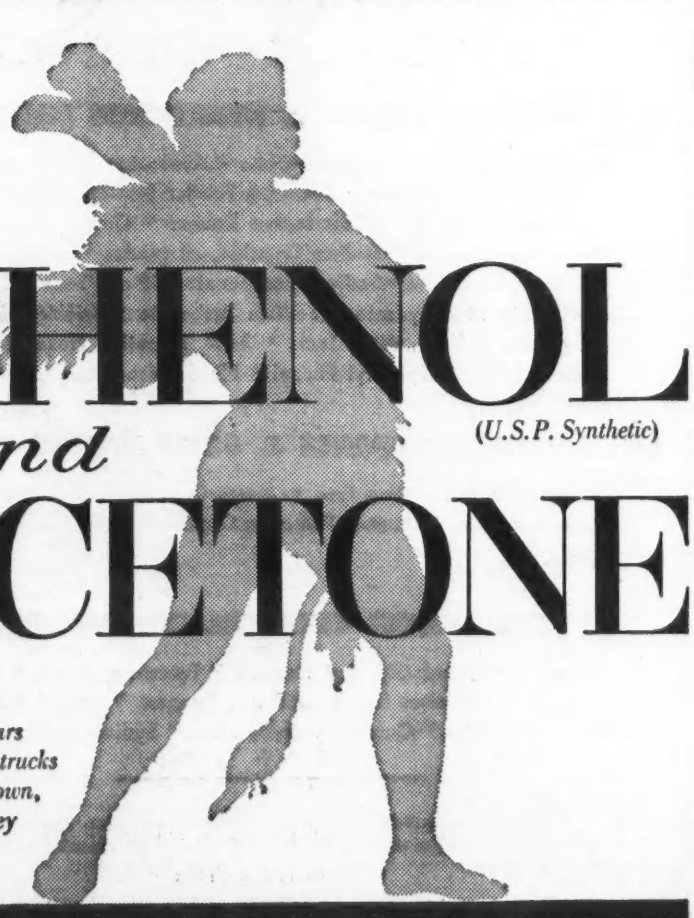

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Aliphatic Organics

Twelve years of R&D and the expenditure of $50 million which preceded the market debut of "Delrin" in January 1960, are beginning to pay off for the far-seeing manufacturer. Right now, 250 US plastic processors are working in the resin, turning out a wide array of industrial and familiar household products that include hair curlers, zippers, bra buckles and door knobs. Abroad, "Delrin" is being used for such things as ladies shoe heels in Sweden, binocular casings in Japan, and toothbrush handles in New Zealand.

All-told, commercial applications number 515 (as of February 1, it's necessary to note because new uses have been coming along at a one-a-day clip) and 200 more—US as well as foreign developments—are catalogued.

But is the "Delrin" producer sitting back, satisfied with this far-flung, diverse acceptance of its product? Obviously not. At a press conference last Tuesday (February 7), the firm announced that it is reducing the price of its new thermoplastic to 65 cents a pound on March 7. "We have high hopes for the future," a company spokesman said, disclosing the 15 cent cut.

Introduced at 95 cents a pound, Delrin was reduced 15 cents in two separate actions last year (February 1 and June 1). Now, at the new level, it will have an even greater price advantage over competitive materials, specifically brass and die casting zinc alloys.

More important as a selling point, however, is that the combined forming and finishing costs are also considerably higher for a part cast in brass or zinc—or aluminum or any other metal—than for the same part injection-molded in "Delrin" acetal resin.

Analyses of sales, the producer says, show that in 82 percent of the 515 known commercial applications, "Delrin" replaced iron and steel representing 33 percent of the total; aluminum 19 percent; zinc 15 percent; and brass 15 percent. Other plastics accounted for 14 percent and other materials (wood, rubber, glass) 4 percent.

Broken down by industry, the use pattern reveals that industrial machinery (234 applications) is the single most important end-area. Then follow: consumer 111; appliance 52; automotive 44; hardware 39; plumbing 26; and packaging 9.

Obtained by controlled polymerization of formaldehyde, "Delrin" is composed of repeating CH_2-O groups characterized by an O-CH_2-O linkage. It is a linear polymer—there are no side branches.

The unbranched chains form into very dense crystals which differ from those of any other plastic and place "Delrin" in the middle ground between plastics and metals. The key to this lies both with the internal crystal forces ("chemical magnetism") and with the geometry of the individual chains—the ability to pack together and fit with their neighbors. Additionally, the extreme length of each chain (over 1,000 formaldehyde units) results in the interconnection of the individual crystals, the chemists tell us.

Acetone — Highly competitive is the way trade people describe the acetone market, which has gotten to be a pretty crowded place. But besides the greater number of suppliers, several other factors figure in the picture. One is the minimal inventory policy being followed by buyers in the coatings trade, a second —necessarily related—is the uncertainty of automotive requirements in coming months.

January sales were fairly respectable, according to several marketers of acetone contacted by OPD last week. Compared with end of the year performance, sources agreed, '61 thus far has been strong.

While a price advance is definitely needed to shore up a sinking profit structure, no such move is being seriously considered, it's understood.

Ethyl Alcohol—Going into December, producers of SD-alcohol (specially denatured) held stocks amounting to 5,782,-021 wine gallons. This represented a sizable build-up of inventory within the thirty-day period. A month earlier, stocks totaled 3,817,490 gallons, and a year earlier, only 2,428,132.

Accounting for the rise was a decline in withdrawals in face of a rise in production.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Feb. 12, 1960
130.51	130.50	130.50	132.54

For Current Prices see page 10

November output of SD-alcohol was 23,044,098 gallons, up from 22,320,982 in October and 22,454,740 in November 1959. Following a counter trend, withdrawals were 21,205,365 gallons, down from 23,-768,086 and 23,835,230.

Output from July 1 through November 30 totaled 119,235,251 gallons, withdrawals, 117,473,938. For the comparable period in '59, production was 108,236,771, and withdrawals 112,439,535 gallons.

November production of completely denatured alcohol was 56,615 wine gallons, down from 99,587 in October and 94,137 in November 1959. Higher, however, were withdrawals which totaled 65,365 gallons. This was still below withdrawals in October (92,836 gallons) and November 1959 (89,013).

Stocks of completely denatured alcohol amounted to 16,142 gallons on November 30, down from 25,095 and 19,445.

Cumulative production, July 1 through November 30, was 289,938, withdrawals, 290,290 gallons. In the corresponding period the year before, output was 308,714 gallons, withdrawals, 310,125.

Production of alcohol and distilled spirits from molasses totaled 27.9 million wine gallons in November; 32.(million gallons in October, and 27.3 million gallons in November 1959. (Statistics published by the Internal Revenue Service of the Treasury Department.)

Trade reports indicate that ethyl alcohol demand is well-maintained, supply fully adequate. Earlier, shortages were suspected in some instances—though not overall—but if this were so it was only a temporary thing reflecting the funneling of raw material (ethylene) to other and perhaps more profitable end-uses.

Recent rumors that a price advance may be on the way are discredited by usually well-informed people throughout the trade. Most admit that they look forward to the day when tabs will be higher and profits a little better . . . but there's slim chance that their wishful thinking will be translated into action before the third quarter—if then.

Glycerine—Some slight improvement in demand is reported for synthetic and refined glycerine. A fair surplus of capacity still exists—and will for some time—however, and this will remain a continual threat to price stability.

Producers entered 1961 with stocks totaling 56.2 million pounds, about 18 million pounds more than they held a year earlier. Consumption and disappearnce both went higher in '60, however, and further gains in consumption are likely in the coming year.

It's also expected that output of refined glycerine will fall off with the smaller amount of by-product available to the big soapers. This would follow from the increasing acceptance of synthetic detergents, and the consequent decline in soap manufacture.

Isooctyl Alcohol—A newly-formed company, jointly-owned by two major US chemical firms, disclosed building plans last week. Set for construction are multi-million-pound-a-year isooctyl and decyl alcohol facilities at Haverhill, Ohio. Fronting on the Ohio River, the 20-acre plant site will allow water shipment of raw materials and finished products, a company spokesman noted.

Construction of the plant, which is designed to use the oxo process, will be started this spring. Completion is scheduled for early 1962.

Isooctyl and decyl alcohols are used in the manufacture of plasticizers for vinyl resins, detergents, synthetic lubricants, weed killers, and surfactants.

Interest in isooctyl alcohol is running strong. Only a few weeks ago, a leading

Aliphatic Organics

chemical manufacturer disclosed that it was building a 2-ethylhexanol plant on a 1,000-acre site near Bay City, Tex. Observers figure capacity will be in the neighborhood of 15 million pounds annually.

Molasses—The Internal Revenue Service reports that 1.3 million wine gallons of molasses were used in the manufacture of alcohol and distilled spirits during November. This compared with 1.4 million gallons in October and 800,000 gallons in November 1959.

Cumulative usage of molasses for making distilled spirits during the first eleven months of '60 was 49.9 million gallons, almost 50 percent more than the 33.7 million used in the corresponding period of '59.

Markets for feeding cane molasses were about steady during the week ended January 31. Demand was slower than normal for mid-winter, however, Agricultural Marketing Service reported.

Prices at New Orleans were mostly 13c. per gallon with only a few sales at the top of the range (13¼c.). At New York, the quote was 15½c. to 16c. a gallon, with the low of the spread up ½c. from the preceding week.

Of considerable interest to trade people—especially alcohol manufacturers—last week was a report that a US firm had purchased 120 million gallons of blackstrap molasses in Cuba. The firm in question is a manufacturer of alcohol via the fermentation route.

Pentaerythritol—Proving once again that price declines serve not producers is the highly-competitive nature of the pentaerythritol market where, despite the recently-lowered schedules for di- and tri-PE, price sniping is detected in quite a few locales. Hopes for a real firming-up are not too high, although further reductions are believed unlikely.

As with many other chemicals sold in powder or granular form, buying of PE is pretty generally restricted to immediate needs, which means frequent price negotiations—decidely not a stablizing influence.

Indicating as well as anything might the current buying mood was this not so facetious remark of a PE marketer: "Buyers seem to want deliveries 20 minutes after placing the order."

A likely but inestimable factor in terms of its market significance is the fact of imports. A usually well-informed source reports that quite a number of people have taken to importing PETN (pentaerythritol tetranitrate), which has been used traditionally to boost the might of TNT. It is suspected, of course, that PETN is somehow used for its explosives force in the government's missile program. The seemingly increasing interest in the chemical is further cause for speculation along these lines.

Although competition has taken its toll on prices and profits, demand for PE is overall good and production continues at a high level. Through the first eleven months of '60, output amounted to about 59 million pounds, indicating that the 1959 record of 64.1 million pounds may be matched, or exceeded slightly.

Sucrose—Louisiana sugar cane grinding operations have been completed for this season. Total output as of January 13 was 6 million tons, according to Agricultural Marketing Service.

Trade reports indicate that Cuba has authorized unrestricted production of sugar from the 1961 crop which is now begin harvested and ground. Estimates place probable Cuban output at between 5 and 6 million Spanish tons, although local spokesmen claim that as much as 7 million tons could be produced this season.

Carbide Starts Up Unit For Alkyl Amine Output

Union Carbide Chemicals Company has completed a unit for production of alkyl amines at its South Charleston, W. Va., plant. The facility has been flexibly designed to produce a variety of nitrogen products, the Union Carbide Corporation division says.

Now being manufactured in commercial quantities are ethyl, butyl and isopropyl amines, but others reportedly can be turned out as market development warrants.

Alkyl amines are used as intermediates in rubber accelerators, agricultural chemicals and pharmaceuticals; and in the synthesis of crease-resistant resins for textiles.

NPVLA, Paint Federation Are Meeting the Same Week

National Paint, Varnish & Lacquer Association and the Federation of Societies for Paint Technology will hold their 1961 annual meetings the same week in Washington.

NPVLA's seventy-fourth annual meeting will be held October 30 to November 1 at Washington's Statler-Hilton hotel. The paint federation will meet at the Shoreham and Sheraton-Park hotels November 2 to 4. That group's Paint Industries' Show will be at the Shoreham.

Reinforced Plastic Sales

—*Continued from page 5*

end-use: some 105 million pounds—or 20 percent of the total output of reinforced plastics.

Bright, too, is the national defense picture—particularly in connection with space vehicles—as the reinforced plastics men see it.

Soviet technical knowledge of reinforced plastics for making nose cones is far behind the know-how in the US. So says a quartet of experts—Samuel Oleesky, a Los Angeles consultant; Jerome Flynt of Studebaker-Packard Corporation's CTL Division; Marvin S. Hochberg of McDonnell Aircraft Company, and Robert B. Wagner of AVCO's Lycoming Division.

Here's what they say:

"America is considerably ahead of Russia in the design of space vehicles due to the advanced state of technical knowledge of reinforced plastics."

A major feature of the SPI meeting was the first public showing of the astronaut couch. Made of polyurethane foam and reinforced plastic, it will be used by the US astronauts in their attempt to reach outer space.

Rayon-Nylon Tire Battle

—*Continued from page 4*

a "good portion" of the 2-cent boost may be spent on advertising.

American Enka Corporation initiated the price increase earlier in the week. Enka, duPont and Beaunit now charge 51 cents a pound for 1,650 denier yarn and 59 cents for 1,100 denier. Enka also raised 2,200 and 3,300 denier but the other two held unchanged at 48 cents.

It's more than likely that American Viscose Corporation, another major tire yarn producer, will have a price announcement shortly.

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Coal Chemicals

Dominant theme in coal chemicals this week, as in many weeks past, is the continuing shortage of basic products and related intermediates. Steel rate is sluggish. Cokeoven yields are low in volume and declining in quality. A year ago this week steel production was at a rate of 93.8 of capacity as post-strike fever kept the mills bustling with activity. Last week steel output was estimated at 52.4 percent of capacity. Sustained steel production at approximately that rate for the past half year has resulted in short supply and even shorter tempers.

Among the basic products, benzene is short though showing scattered signs of improvement. Petroleum suppliers are attempting to close the gap with increased output. Pyridine is tight but sources say imported bases processed in the US for sale on the open market are in high volume. There's one catch. Price is sometimes double domestic level.

Naphthalene is critically tight, trade sources say. Relief is a half year to a year away. Interesting rumors abound concerning plans for a tanker to transport molten petroleum naphthalene to market from a west coast plant yet to be built. Similar tanker-idea is now employed by a sulfur producer. No confirmation as yet but plenty of talk. Also in the works for naphthalene—a big push into pesticides.

Among the intermediates, phthalic anhydride remains short in the basis of naphthalene's supply situation.

Styrene demand is down and has been since October, although only fractionally, and is expected to return to average volume in March. Pre-January 1 inventory building is blamed here. Producers bought in advance and then weren't able to move finished products.

Rubber chemicals are victims of auto cutbacks which have reduced new tire requirements. Replacement tire business is also slow.

Production of steel for the week ended February 4 was 1,492,000 tons, an increase of 1.8 percent from the preceding week.

Index of production for the week was 80.1, as compared with 78.7 in the week ended January 28.

Production for the year through February 4 was 46.2 percent behind the same period last year.

Based on assumed 1961 steel capacity, production for the week ended February 4 was 52.4 percent of capacity.

Basic Products

Benzene—Supply continues short.

Cokeoven supply shows no advance. Steel operating rates continue at approximately 50 percent, some two-thirds of normal production.

Benzene supply from cokeovens is thus restricted to 8 to 9 million gallons a month compared to petroleum supply of approximately 25 million gallons monthly.

Prospects of steel advance before second half are narrow. Petroleum facilities are operating at near peak rates so that any increase in supply in the next few months must come from new sources.

A number of plants are building but the bulk of them will not become operative until the second half of this year or in 1962.

"Hydeal" plants are opening up but are believed to be beset with the usual startup difficulties. Result is they are not adding material to the market.

Some trade sources report benzene demand is easing, thus creating added supply. These reports are based apparently on a slight dip in styrene demand.

Sources predict the fractional downturn in styrene demand will continue through February and stage a comeback to normal production in March.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100—1949 average)

Last week	Prev. week	Last month	Feb. 12, 1960
117.52	117.52	117.46	118.40

For Current Prices see Page 10

Coaltar Pitch—Although supply of pitches has been reduced because of low steel operating rates, there appears to be no shortage of material as demand also has declined.

Carbon pitch demand has decreased primarily because steel mills have been shutting down electric furnaces where possible and depending upon blast furnaces thus reducing electrode demand.

Foreign competition remains a factor with Japanese and European interests high on the list of foreign rivals.

One US supplier points out, however, that many pitch orders carry special requirements which are best "brewed" here in the US by suppliers familiar with domestic production techniques and applications.

Prices are unchanged since December 16 when aluminum and carbon coaltar pitch was reduced to $42 a ton, bulk, works. Industrial, core, fiber and roofing grades are unchanged from longstanding schedules.

Naphthalene—Supply continues critically short according to trade sources.

Cokeoven material is restricted due to lagging steel output while pertoleum naphthalene plants have yet to turn the spiggot.

Demand continues strong even though phthalic output has dipped fractionally.

Trade sources remarked last week that naphthalene is headed for an expanded use in pesticides.

One chemical firm last year introduced a pesticide employing naphthalene which shows much less toxicity in plants, pets and humans than DDT.

Trade opinion has it that this particular pesticide and others patterned after it will boost naphthalene demand considerably.

Also remarked about last week were unconfirmed reports that a petroleum naphthalene producer has plans to build a tanker capable of carrying molten naphthalene.

Only recently a leading producer successfully began transporting molten sulphur in a converted tanker.

The petroleum naphthalene producer's plant is to rise on the west coast. If rumors of the tanker are true, transportation costs from the usually high-freight areas West of the Rockies will plummet for any shipments to the East where major markets exist.

Another good possibility is that use of a tanker, or tankers, would facilitate shipment of naphthalene to overseas markets.

The US is the only nation with petroleum naphthalene capabilities in sight and so stands to become a net exporter of material within two years.

European demand is high and must depend on coal-derived naphthalene for all supplies. These supplies are proving insufficient.

With US naphthalene capacity slated to exceed 800 million pounds annually by the end of 1962 and current consumption somewhat over 500 million pounds, the US export possibilities loom as a profitable venture.

Pyridine—Domestic supply of 2° pyridine remains curtailed.

There's plenty of material on the open market though, sources report, but at prices sometimes 100 percent above quoted contract levels.

Suspicion is that this material consists of imported bases shipped in from Europe and processed in the US for resale.

Toluene—Somewhat of a balance is being achieved in toluene supply and demand.

Trade sources report that large-volume

Coal Chemicals*

Estimated output of coal chemicals recovered from cokeoven operations during the week ended February 4, were as follows:

Ammonia liquor	lbs.	469,782
Ammonium sulfate	lbs.	19,756,951
Benzene	gals.	1,905,227
Coaltar	gals.	10,413,505
Crude chemical oil	gals.	304,478
Solvent naphtha	gals.	60,898
Toluene	gals.	426,284
Xylene	gals.	121,795

* Based temporarily on 1960 theoretical capacity.

Coal Chemicals

orders of one or two million gallons are difficult to gather but that smaller amounts are readily available.

Sharp competition is reported between cokeoven and petroleum toluene suppliers with the advantage being gained by buyers.

Despite the relatively small amount of cokeoven toluene being produced, in comparison to petroleum material, the cokeoven people are favored by proximity to volume-consuming areas.

Xylene—Demand for xylene for solvent purposes is down as is solvent business in general.

Orthoxylene demand remains strong, however, on the basis of naphthalene shortage.

Most phthalic anhydride producers prefer naphthalene but in the current short supplied market many are willing to make-do with orthoxylene until petroleum naphthalene units begin coming on stream.

Most observers see ortho demand tied in completely with naphthalene availability. Unless phthalic yields of ortho can be raised, sources say, ortho will be in strong demand only when naphthalene is short.

Overseas the picture is different. While quality differential in the US may preclude widespread expansion of ortho as a permanent naphthalene substitute it is thought that the European market may be ripe for heavier ortho application.

For one thing, it is not thought that Europe's naphthalene shortage will be cured as rapidly as the US shortage. For another it is thought that lower production costs will enable European producers to employ o-xylene as permanent feedstock.

Italy is a prime example of a phthalic producer with a growing dependency on ortho. In the last fortnight a US producer announced that an aromatics plant will rise adjacent to its Naples refinery and is slated to make, among other products, some 30 million gallons of benzene and orthoxylene.

In the current US domestic market supplies are deemed adequate with no price changes noted.

Intermediates

Benzaldehyde—Demand is reported to have slumped in the last six months. Supply has not been affected, however, and adequate stocks are reported on hand to meet calls.

Prices are unchanged since last October when the following schedule became effective: NF material in drums, 74c. a pound, technical grade in drums, carlot or truckload, 42c. a pound and lesser amounts 44c.

Fumaric Acid—Demand has eased for fumaric though nowhere near the point that it has for maleic anhydride.

Fumaric uses in polyesters and lubricants remain well sustained.

Producers report they are hoping for FDA reinstatement of fumaric for use in foods. No progress toward this aim is claimed but should it be accomplished the added sales would certainly be welcome.

Phthalic Anhydride—Market conditions remain unchanged with demand well sustained but supply on the short side.

Restricted naphthalene supply has of course cut into phthalic production. Some producers have turned to o-xylene in attempts to maintain production schedules.

Prices remain firm.

Rubber Chemicals—Demand for rubber chemicals, mercaptobenzothiazyl disulfide, mercaptobenzothiazole, diphynleguanidine and di-o-tolyguanidine has slumped.

Mounting auto dealer inventory and consequent cutbacks by all auto manufacturers has sharply reduced production of new tires.

Bad weather and recessionary atmosphere has cut into replacement tires sales as well.

One rubber chemicals producer remarks that manufacturers are ordering on a strictly hand-to-mouth basis.

Latex and textile producers are also cutting down inventory and ordering rubber chemicals on a short term need basis only.

Styrene Monomer—February commitments are being cut back by consumers, producers report.

Reason for the slackening is held to be the strong consumer inventory building which took place in December in expectation of a January 1 price hike.

Consumer stocks reached a high level and were not greatly expanded in January due to a downturn in demand.

Producers say consumer inventory should be reduced to replenishment levels in March and that sales for that month should return to regular volume.

Vinyltoluene—Success of this product over the past year was dependent on the availiability of styrene monomer.

When SM supply tightened some consumers turned to vinyltoluene as a substitute with most reporting favorable integration into production lines.

As soon as SM became plentiful again, however, most consumers resumed use of the longer established material.

Thus far the use of vinyltoluene has been solely in applications where styrene monomer has held sway. What's needed, a vinyltoluene producer remarks, is intensified research programs to come up with use based on vinyltoluene's own properties.

Dry Color Men to Meet

Dry Color Manufacturers Association will hold its next monthly meeting on Wednesday (February 15) at the Delmonico hotel in New York. Speaker will be Gilbert E. Cain, manager of safety in the engineering department of Hercules Powder Company. His talk will deal with safety in handling industrial chemicals.

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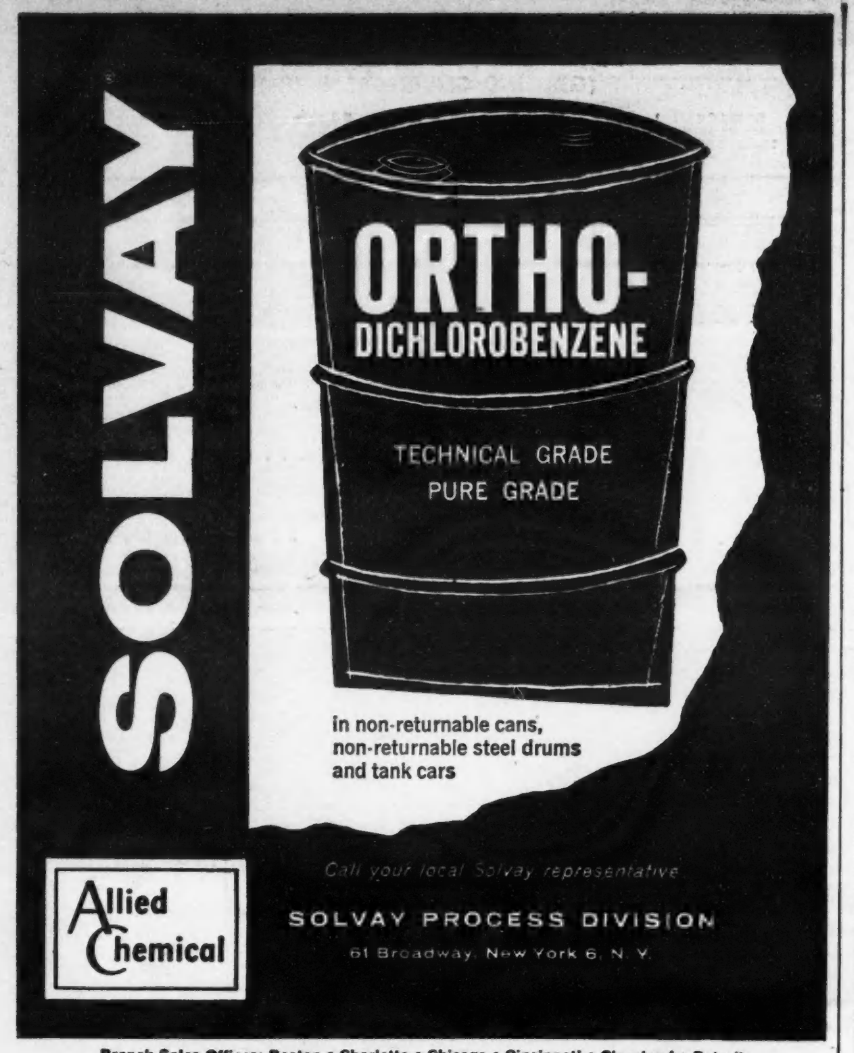

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Jobs & People

Advance Solvents & Chemical, a division of Carlisle Chemical Works, New Brunswick, N. J.—Dr. Bernard Ackerman has been appointed director of laboratories.

Allied Chemical Corporation, New York—**Herbert I. Jones,** formerly assistant comptroller of the nitrogen division, has been appointed comptroller of the plastics division.

Aluminum Company of America, Pittsburgh, Pa.—**Rolf Rolles** has been named head of the Alcoa's aluminum paint and pigment research program, succeeding **Robert I. Wray,** who recently retired after thirty-eight years with the company.

Commercial Solvents Corporation, New York—**Russel T. Smith,** sales representative for the industrial chemicals department, has been assigned to the Cincinnati, Ohio, district office.

Food Machinery & Chemical Corporation, New York—**Horace W. Lee,** veteran sales executive of the Niagara Chemical Division, has retired after forty-one years with the company.

W. R. Grace & Co., New York—In the nitrogen products division, **B. L. How** has been temporarily assigned to Federal Chemical, Ltd., in Trinidad as assistant to the general manager. **J. E. Little** will succeed Mr. How as ammonia product manager.

Hooker Chemical Corporation, Niagara Falls, N. Y.—**Stanley A. Mattison** has been appointed director of public relations in New York, a newly created post at the executive management level.

Koppers Company, Pittsburgh, Pa.—**W. B. Jackson,** formerly manager of the production department, has been appointed manager of operations. He is succeeded by **G. D. Melville** whose present post—manager of the planning department—goes to **W. D. Stickle.**

Eli Lilly & Co., Indianapolis, Ind.—**William W. Bromer** and **W. Max Stark** have been elevated to research associates. **Calvin D. Smith** has been named manager of the Memphis, Tenn., district, succeeding **J. Armour Blalock,** who recently began an extended leave of absence due to illness.

Mobil Chemical Company, a division of Socony Mobil Oil Company, New York—**R. E. Kreider** has been appointed manager of the development division.

Monsanto Chemical Company, St. Louis, Mo.—**George M. MacLeod** has joined the inorganic chemicals division as a senior sales specialist.

Neville Chemical Company, Neville Island, Pa.—**John E. Dereich** has joined the staff of the technical division in research and development work.

Pittsburgh Plate Glass Company, Pittsburgh, Pa.—**Frank G. Moore,** general traffic manager of the chemical division, has retired after fifty years in the chemical industry.

Sohio Chemical Company, Lima, Ohio—**Vernon C. Page** has been appointed technical service representative.

U. S. Borax Research Corporation, Boron, Calif., a division of United States Borax & Chemical Corporation—**Dr. Wang Mo Wong** has joined the company as head of the pilot plant research staff at Boron.

API and MCA Are Moving Projects on Hydrocarbons

American Petroleum Institute and Manufacturing Chemists' Association are moving their research projects on physical and thermodynamic properties of hydrocarbon and other chemical compounds. The move takes them from Carnegie Institute of Technology to Texas A. & M. College. Tentative date for the move is April 1.

The work of the new research center involves: 1. Examination of world scientific literature for data on characteristics of hydrocarbon and other chemical compounds. 2. Critical evaluation of these values to make readily accessible uniform data of the type required by all laboratories in industry and world science. 3. Setting up theoretical values for compounds not yet measured by man and 4. Correlating existing information and developing new, theoretical approaches to improving compounds.

Reichhold Appoints Two In Its Plastics Division

Charles S. Stryker has been appointed sales manager, and William F. Turner, director of technical services for the plastics division of Reichhold Chemicals, Inc., White Plains, N. Y.

Mr. Stryker will take over sales of resins to the plastics industry and sales of peroxide catalysts to all industries, continuing as technical liaison with two RCI divisions. Mr. Turner will direct all national technical services of the plastics division.

Cellophane: It's Old

—Continued from page 4

a price-per-pound advantage over cellophane, duPont points out.

As an example of the continuing vitality of cellophane, duPont cites the 1960 growth of its "MSD-60" film for baked goods.

A modification in "MSD-60" to furnish strong seals at 50 degrees lower temperature brought a 44 percent sales increase for the material—the highest gain scored by any of the major cellophane types manufactured by duPont.

Other key developments spurring cellophane consumption during the year, duPont notes, were the increasing acceptance of polymer-coated types and the growing importance of film in combination materials.

Among the polymer-coated types, the company reports a 21 percent increase in sales of its "K" cellophane—despite the higher cost of this premium film.

Cellophane's combination with other materials, such as polyethylene, through lamination and extrusion coating, is said to have contributed substantially to the 1960 sales rise.

Sales of film combinations by converters jumped an estimated 38 percent over 1959—a year that had brought a 45 percent increase over 1958.

Arabol Adhesives Facility On Stream at Delaware, Ohio

Arabol Manufacturing Company, New York, has just opened a new adhesives plant in Delaware, Ohio, and is preparing to bring another on stream at Portland, Ore., early this spring.

The Delaware facility encompasses 20,000 square feet in area and is producing 200 adhesives for firms in the heavily industrialized surrounding area.

The 12,000 square-foot Portland plant, which will be the company's ninth adhesives facility, will be under the direction of Spencer Tilden, the firm's Pacific division vice-president, with headquarters in San Francisco.

R&D Spending by Gov't: About $9.1 Billion in 1961

An estimated $9.1 billion will be obligated by the federal government for scientific research and development during the current fiscal year, according to a study of government budgets prepared by the National Science Foundation.

Of the total, about $600 million will be for building laboratories and purchase of equipment. About 10 percent of the remaining $8.5 billion is earmarked for basic research.

The 1961 total, of $9.1 billion, compares with obligations of $7.4 billion in fiscal year 1959 and an estimated $8.6 billion in fiscal 1960. Ninety percent of the R&D funds will be administered by three agencies—Department of Defense, Atomic Energy Commission and National Aeronautics & Space Administration.

Agricultural Chemicals

The trend toward higher analysis fertilizers continued during the past year reports the Bureau of Census. Concentrated superphosphate output for the twelve months was up 12 percent but shipments did not match the output as only a two percent increase was reported for that item. Phosphatic fertilizers scored the biggest gains as production was boosted 25 percent and shipments were up about 15 percent.

Shading on the listings for urea is reported to have dropped the price for bulk urea to $86 per ton, f.o.b. plant. At least one producer is reported to have adopted the $4 per ton lower quotation with several other producers claiming that they will remain competitive.

In preparation for the coming fertilizer year, the government of Iran and Korea are seeking large amounts of fertilizers. The Bank of Korea is reported to have sent out invitations with the intention of purchasing about $7,640,000 of ammonium sulfate and about $100,000 of ammonium phosphate. Sealed bids are to be received until 10 a.m. Seoul time, February 16.

Allocations have been made to individual importers for purchase of the fertilizers. These purchases are to be in addition to the 66,900 tons of nitrogen fertilizers on which bids were received earlier in the month by the Korean government.

The government of Iran is requesting fertilizer and pesticide quotations for the coming Iranian year, reports the *Foreign Commerce Weekly*. Chemical Bongah, the department in Iran's Ministry of Agriculture which purchases agricultural fertilizers and pesticides from foreign suppliers for distribution or sale in Iran, wants price quotations from US producers, c.&f. Khorramshahr, on substantial amounts of superphosphate, 48 percent, and potassium sulfate, 50 to 52 percent. Quotations should be addressed to the Director, Chemical Bongah, Engineer SHOA, Tehran, Iran.

Chemical Bongah soon may be in the market for urea, 46 percent; ammonium nitrate, 26½ percent; ammonium phosphate, 18 to 19 percent nitrogen and 47 to 49 percent phosphorous and ammonium sulfate, 21 percent minimum.

For the present Iranian year, which ends March 20, Chemical Bongah, has been authorized to purchase 35,000 metric tons of fertilizers. The Ministry of Customs and Monopolies has purchased 7,000 tons of chemical fertilizers for tobacco and tea plantations. Present consumption, met by imports, is about 50,000 tons a year.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Feb. 12, 1960
111.39*	110.71	110.71	110.95

* Revised.

For Current Prices see page 10

Animal and Plant Foods

Ammonium Sulfate — With cokeoven supplies at a near record-low, producers have been faced with an added problem of getting what is available to fertilizer formulators. Snow over much of the nation has tied up normal transportation and in the process blocking shipments of many fertilizer materials. Sources report that with shipments snafued, it is difficult to estimate the level of the current demand. At best, sources believe, business is about normal for this pre-fertilizer season.

In some areas, particularly the Mid-West, the supply/demand situation is tight. This primarily due to a shortage of ammonium sulfate in that area. Listings are reported to be holding firmly to the old price of $32 per ton, no changes reported. There have been some reports that a premium is being offered for spot material but according to sources contacted by OPD, no premium exists nor is one likely is be offered for the present. However, sources caution that should cokeoven supplies fail to keep pace with the usual boost in demand that comes with the beginning of the fertilizer season, the pinch might take on serious dimensions.

Animal Proteins—Listings for fishmeal and scrap are reported by trade sources to be showing renewed strength after a dismal performance over the past six-months. Currently at a range of $92.50 to $95 per ton (bagged on both Atlantic and Gulf coasts) for meal, the latest listings represent a boost of about $3 per ton over those in effect a few weeks ago.

Superphosphates—Production of superphosphates in December was placed at 219,469 short tons, with shipments at 154,164 short tons and stock at 434,463 short tons, reports the Census Bureau.

Concentrated superphosphate production was reported at 75,120 short tons as against 89,451 short tons at the end of November. Shipments of concentrated material were estimated at 63,774 short tons, up from the 51,121 short tons shipped in November and 55,122 short tons reported for December, 1959.

Stocks of concentrated material held at producers' plants at the end of December were reported at 182,180 short tons an increase over the 173,919 short tons held at the beginning of the month and well above the 124,020 short tons held at producers' plants at the end of December, 1959.

Pesticides

Copper Sulfate—Exports of copper sulfate were boosted a healthy 250 percent during the first 8 months of 1960. The revival in export demand is reported to be the result of its use as a fungicide on banana plantations in Central and South America, the Business & Defense Services Administration reports.

While the rate of copper sulfate exports is running at about 10.6 milion pounds for the first 8 months of 1960, it is still well below the level in 1957 when 67 million pounds were shipped abroad. Production of copper sulfate in the first 8 months of 1960 was set at 14,576,000 pounds, or an increase of 24 percent, from the same period in 1959.

DDT—Production of DDT in the first 8 month of 1960 was 107,496,108 pounds, representing a 2.7 percent increase over the 104,647,596 pounds produced in the same period of 1959, reports the Business and Defense Services Administration.

Exports in the first 8 months of 1960, on a 100 percent basis, represented 64 percent of the total US production, and were well above those of the 1959 period. The International Cooperation Administration procurement of 75 percent DDT wettable powder for the world-wide anti-malaria program is expected to continue at the same high level in the fiscal year ending June 30, 1961. Although overall exports of DDT are up, shipments of technical DDT were off, owing principally to the loss of markets in Mexico, which now has two DDT plants in operation.

Superphosphate & Other Phosphatic Fertilizer Production

Following are data compiled by the Bureau of Census indicating superphosphates and other phosphatic fertilizer produced and shipped in the United States, January, 1960 through December, 1960. Included are percentage changes. All material is 100 percent P_2O_5 in short tons.

	1960 Season In short tons 100 Percent P_2O_5		1960 Season Percentage change from 1959	
	Production	Shipments	Production	Shipments
Normal and enriched	1,281,271	673,432	— 8	— 1
Concentrated	968,921	910,386	+12	+ 2
Other phosphatic fertilizer	400,182	358,869	+25	+15
Total	2,650,374	1,942,687	+ 3	+ 3

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Drugs, Fine Chemicals

While doing a nice business, drug and fine chemical makers are feeling acute pangs of competition. Really hard-hit are some of the antibiotics producers, in particular those who are attempting to turn a respectable profit on sales of penicillin. (This, disgruntled marketers tell us, is an award-winning trick when and if one can do it.) Inducing weakness in the overall market, reportedly, is one especially depressed spot, feed-grade procaine penicillin; it appears that price concessions are being offered by a major manufacturer for a specialty mix that incorporates the antibiotic.

Vitamin makers are faring appreciably better these days, at least in terms of sales volume. Low prices on most products, while playing away with profits, have discouraged imports and for ascorbic acid, temporarily high prices and small stocks in Europe, inclining manufacturers to look for sales in their own backyards, have had a stabilizing effect on the domestic market.

Business & Defense Services Administration offers a handy explanation for the sometimes weak tone of the sulfa drug business. Imports, the Commerce department agency says, increased by 1,300 percent from 1955 to 1959. The last year, sulfanilamide and sulfathiazole accounted for 72 percent of total arrivals of 627,719 pounds, with the major suppliers Denmark, West Germany, United Kingdom, The Netherlands, Italy, and France.

Less foreign demand is bound to result sooner or later as traditional buyer nations become self-sufficient in drugs. India, for example, is expanding its production steadily. In 1959, output of penicillin, chloramphenicol, isonicotinic acid hydrazine, and sulfa drugs was increased and, in addition, capacity for vitamins A and B_{12} was installed.

US concerns are necessarily participating in these expansions. And ultimately, as a result, some domestic capacity will be idled. That's the rub.

Ascorbic Acid — Several usually well-informed trade sources dispute elsewhere published reports that the domestic market for ascorbic acid has weakened. On the contrary, they maintain that relative stability prevails at the $6.80-$7.05 schedule posted by major manufacturers last November.

A firming influence, it's said, is the stronger European market where "C" is selling currently at $6.75 a kilo (the coated product at $7.25), the higher prices reflecting a tightening supply situation.

Because of this, European producers of the vitamin are tending to backyard business and concentrating less on export markets, it's understood. In addition, there's general agreement that the low domestic prices are discouraging importers who are finding it increasingly more difficult to turn a respectable profit in vitamin trading.

Meanwhile, here at home in the USA, manufacturers are looking to overseas business to supplement domestic sales. In recent months, they've been fairly successful. Exports in November totaled 98,054 pounds (valued at $278,962), up from 90,566 pounds in October but below the July high of 104,765.

November shipments went to: Argentina, 16,416 pounds at $22,126; Austraila, 10,300 pounds at $22,126; Brazil, 13,596 pounds at $33,150; and Canada 19,916 pounds at $60,839.

South America is the biggest single export area for US-manufactured ascorbic. Because of its antioxidant activity, the vitamin is used there—and especially in Argentina—for the curing of meat, in addition to other pharmaceutical and food requirements.

Meat curing was a major market for "C" here between 1954 and 1956, but in recent years, sodium erythorbate and erythorbic acid have been used more for this purpose.

Penicillin—Oh boy is business competitive. And as any rightly disgruntled marketer of the antibiotic will tell you, most of the trouble, specifically price weakness, stems from only one area, albeit an important one: feed-grade procaine penicillin.

Weakness in the veterinary market, as one would logically expect, is felt overall, however, because buyers of the antibiotic for human consumption are keen to get a price consideration if it's being offered elsewhere.

To date, nonetheless, most trades have been made at long-posted levels: $18 a billion units for the potassium pencillin, $20 a billion units for procaine.

This does not mean, of course, that some trading is not being conducted at a lower schedule. In fact, quotes of $17 and $17.50 for potassium have been rumored, but it's inadvisable to put much stock in them.

Despite the intense competition—and maybe the reason for it—output of penicillin rose 44 percent in the first 8 months of 1960, to 368,725 billion units, from the comparable period in 1959. At the same time, exports rose to 54.924 billion units from 35,837. Exports of dosage forms, however, dropped to 32.861 billion units from 34,248. Business & Defense Services Administration notes.

Saccharin — The domestic saccharin market has been extremely competitive over a long stretch of time so it's news that the pressure from imports has been alleviated to some extent. This results not from any substantial decline in volume of shipments but rather from the increased prices importers are now charging because of higher replacement costs. Coincidentally, competition is getting more vigorous among the importers because their ranks have grown. Not so, however, their profit margins.

Japan, as the only supplier, shipped 24,905 pounds of saccharin to the US in November. The entire quantity was valued at $35,782 and dutied at $7,545, according to the Foreign Trade & Economics Operations Division of the Bureau of Census, US Department of Commerce.

Usually, The Netherlands appears on the suppliers' roster, though it accounts for an appreciably smaller quantity than does Japan.

Besides foreign goods, competitive sweetening agents, which have come along since saccharin was introduced, also pose a threat to the stability of this market.

Streptomycin—Unchanged, the quote on streptomycin is $30 to $32 a kilo (a quantity spread), and it's believed that most trading is being conducted at this level. In general, demand is good.

Human consumption of dihydrostreptomycin has continued to decline, reportedly, but veterinary requirements are well-maintained; export demand is also strong.

In a periodic market review, BDSA notes that output of streptomycin was at a slightly higher level during the first 8 months of 1960 than in the comparable period of '59. Exports were also up about 3 percent, the agency said, with more than half of the total, 23.4 million grams, going to India where a campaign to wipe out tuberculosis is in progress.

Through August of last year, DHS production also ran substantially higher than in the comparable period in '59. And indicating the importance of foreign markets is the fact that approximately 26 percent of total output was xeported. Shipments of bulk material to India, the major buyer, amounted to 20.6 million grams.

Strychnine—November imports amounted to 12,000 pounds for which the value was $10,517 and the duty $1.200. Sources, according to the Foreign Trade & Economics Operations Division of the Bureau of Census, US Department of Commerce, were: India 10,000 ounces, valued at $8,393 and dutied at $1,000; France 1,500 ounces, valued at $1,491 and dutied at $150; and the United Kingdom 500 ounces, valued at $633 and dutied at $50.

Strychnine, which is derived from nux vomica, is strictly an imported item. Spot

—Continued on page 48

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Feb. 12, 1960
59.27	59.27	59.27	60.22

For Current Prices see Page 10

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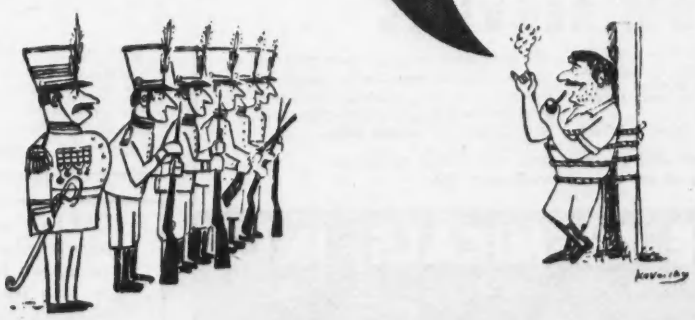

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Drugs, Fine Chemicals

—Continued from page 46

prices consequently reflect conditions at source.

Sulfa Drugs—Since the beginning of the year, trade people have found demand for sulfa drugs considerably improved. This does not mean, of course, that all's right with the market. On the contrary, some price weakness is believed to exist and alongside it competition from imports which have risen spectacularly in the past few years.

According to BDSA reckoning, imports of sulfa drugs increased by 1,300 percent from 1955 to 1959—to a total of 627,719 pounds. And what really disturbs some of the US trade is that foreign manufacturers have no license or any other agreement whereby they are authorized to manufacture certain drugs of the sulfa family.

Sulfanilamide and sulfathiazole accounted for 72 percent of 1959 imports, BDSA figured, calling the major suppliers Denmark, West Germany, United Kingdom, Netherlands, Italy, and France.

Output of sulfa drugs was 3,453,000 pounds in the first 8 months of 1960, up 2 percent over 1959. At the same time, export demand was up 11 percent, totaling 523,343 pounds in the January-August period last year. Major shipments went to: Switzerland, 53,435 pounds; Canada, 40,184; Hong Kong, 39,686; and Panama, 34,143.

Botanicals

Demand for botanicals is restrained with the result that only a very few price fluctuations are noted. Of these, the most important, perhaps, is the 25 cent a pound boost in USP Kobe agar just posted by dealers here. Colchicum seed and cubeb are also slighly higher.

Imports detained by the Food & Drug Administration at the Port of New York during the two week period ended January 27 included 4 lots (176 bags) of karaya gum, 3 lots (339 bags) of kola nuts, and 5 lots (231 cases) of papain.

Agar—Dealers in the New York area last week posted a higher schedule for USP Kobe No. 1 strip. Advanced 25 cents a pound, the quote became $3 to $3.10 a pound.

The substantial change, it was explained, followed reports that the new crop, which should be arriving here in a few months, is shorter than anticipated.

Agar has been a very firm market over the past year. At no time, have supplies been sufficiently large, or demand sufficiently weak, to knock prices down to the more normal $2 level.

Buchu Leaves—Buying interest is described as good, but with stocks in dealer's warehouses adequate to meet anticipated requirements, continued price stability is likely. Current range: 70c. to 75c. a pound.

Colchicum—Colchicum seed is slightly higher at 85c. to 90c. a pound. Previous quote was 75c. to 80c.

Limited stocks as well as limited offerings spurred the change. The root, however, is unchanged, at 35c. to 45c. a pound.

Cubeb—Current quote is $1.30 on the NF, $1.45 a pound on the powder. Modest demand is reported.

News Briefs

Calming Dental Patients: A team of dental surgeons reports "Vistaril" is unusually effective in the control of nervousness and apprehension in patients undergoing oral surgery. Writing in *Journal of Oral Surgery*, they say signs of anxiety were eliminated in 101 of 125 patients, between the ages of 8 and 78, tested. Chemically hydroxyzine, "Vistaril" is manufactured by Chas. Pfizer & Co., Brooklyn, N. Y.

Cholesterol Foe: A new drug to lower cholesterol levels has been made available to Canadian physicians by Baxter Laboratories of Canada, Ltd. Trade-named "Choloxin," it is a prescription tablet to be taken by mouth. It reportedly reduces cholesterol levels but without metabolic stimulation. Chemically it is sodium-dextro-thyroxine.

New Antihistamine: Ciba Pharmaceutical Products, Inc., Summit, N. J., reports that a nation-wide clinical survey of its new antihistamine, "Forhistal," indicates that the drug worked better than previous therapy in eight out of ten cases of allergy and pruritus. Considering the complaint that antihistamines generally have a side effect of drowsiness, Ciba says, a salient result of the survey was that nine out of ten persons tested said they felt no side effect.

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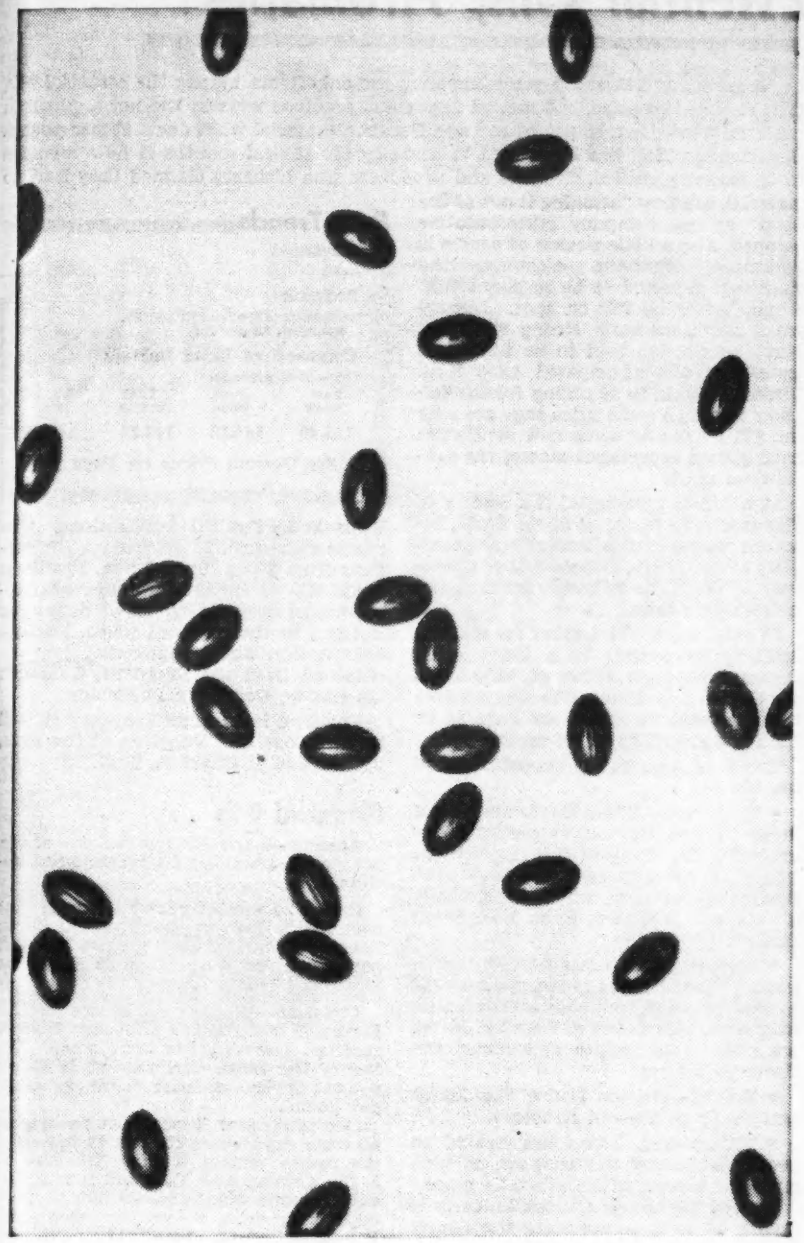

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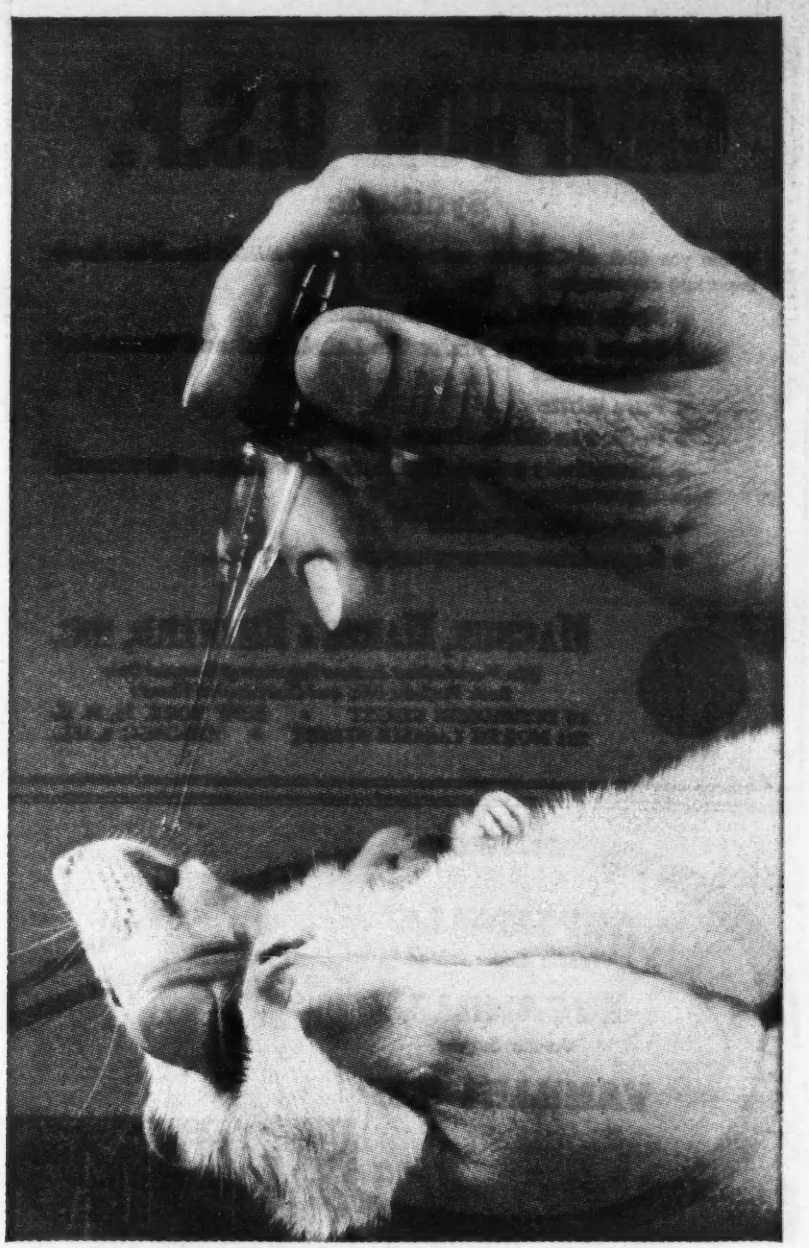

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Essential Oils, Aromatics

Algerian and Bourbon geranium were the only items, among the essential oils, that changed in price, but several important products were in the news. Algerian material went down $3 per pound and Bourbon material went down $2 per pound. Spearmint, which has been hard to come by for several months is now reported to be rather plentiful. Growers and producers who hitherto claimed they had no material, are now "bringing it out of the wood" as one company representative quipped. Also a little weaker at source is Formosan citronella although the change is reported to be so slight that it may never be felt on spot. Lemongrass continues quite strong with last year's production said to be 1,250 tons instead of the anticipated 1,400 tons. Demand is said to be strong for sandalwood although some price tags are over the $25 mark and some new synthetics have gained acceptance among the sandalwood users.

Price Trends

Advanced
None

Reduced
Geranium, Algerian, $3 per lb.
Bourbon, $2 per lb.

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Feb. 12, 1960
143.49	144.12	144.50	147.18

For Current Prices see Page 10

At a recent meeting of the Society of Flavor Chemists, Dr. William Stahl, research manager of a leading spice company in Baltimore, discussed the "Chemistry of Tea." The following information is from that talk.

In 1959, the world market for tea was 1,670,000,000 pounds with India being the chief producer. Other growing areas are Ceylon and Africa. Growing production methods in Africa are said to be the most scientific of all areas.

The four steps in the manufacture of tea are:

- Withering—Green leaves are placed in racks and allowed to partially dry and wilt. The result of this is green tea which is popular with the Japanese. Black tea, however, which is the bulk of the tea produced, must be treated further.
- Fermentation—This word is a misnomer. What the tea industry speaks of as fermentation is actually an enzymatic oxidation. The length of time the leaves are allowed to oxidize determines the flavor of the tea.
- Rolling—Rollers bruise the leaves and break up the cell structure.
- Firing—The leaves are heated in ovens to destroy the enzymes so that no more fermentation will take place.

One of the things the tea industry is trying to do is to correlate the names the tasters call the various flavor constituents and their chemical names, Dr. Stahl said.

Basically, the aroma is due to the essential oils. The fresh leaf aroma is due principally to the presence of hexene-3-ol-1 and hexene 2-al-1. The rosy odor is due to the presence of phenyl ethyl alcohol, citronellol, geraniol, methyl salicylate, phenyl acetic acid and traces of isovalealdehyde, salicylic acid, paracoumaric acid and butyraldehyde.

Thirty percent of the dry weight of tea consists of phenolic compounds, flavenols (acids and depsides), gallic acid and digallic acids. Theogallin, which is a phenolic compound, is found in no other place in nature except in tea, according to Dr. Stahl.

Also found are chlorgenic acid, para coumarol quinic acid and neochlorgenic acid. Amino acid tends to combine with the polyphenols to give varying odors and flavors.

Among the non-phenolic compounds are:

- Two and one-half to 4.8 percent of caffein on a dry weight basis.
- Twenty-seven known amino acids and various sugars and polysaccarides, pectins and crude fiber.

The principal amino acid is threonine which is found only in tea. Also present are some lipids and sterols.

Today (February 6) is registration day at Columbia College of Pharmacy for an evening course in The Fundamentals of Cosmetic Technology; The Theoretical Basis and Practical Applications. The course consists of 13 lectures on Wednesdays from 7 p.m. until 9 p.m. It will be essentially of the seminar type with autorities in cosmetic chemistry delivering lectures in their special fields. Further information about registering may be obtained from the Registrar, Columbia University, College of Pharmacy.

The first lecture, on February 15, will be Structure and Function of the Skin, by Leonard T. Chavkin, Ph.D.

Imports Detained at N. Y.

Week Ended January 27

Anise seed, 200 bags.
Black pepper, 4 lots, 340 bags.
Caraway seed, 2 lots, 150 bags.
Chillies, 160 bags.
Coriander seed, 2 lots, 745 bags.
Nutmegs, 3 lots, 119 bags.

Essential Oils

Almond—Sweet almond remains at 60c. per pound following its recent price decline.

Bay—The market remains firm. Prices continue at their previously-quoted levels: Puerto Rican 55-60 percent material, $3.60 per pound, and West Indian 50-55 percent material, $3.75 per pound.

Cirtonella—News from source is that Formosan material is a bit easier. No spot reaction, however, has been noted. The low of the range continues at $1.20 per pound. Ceylon material continues at $1 per pound.

One interesting, though not necessarily accurate explanation for this easing off of the source market is this: February 17 is the Chinese New Year and it is an ancient custom that Chinese businessmen clear their debts before the celebration. For this reason, the holders of, say citronella oil, will lower the prices a bit so they can sell substantial quantities of material and accumulate enough cash to satisfy their creditors.

Coupled with this is the possibility that buying interest has tapered off due to the relatively high price of Formosan material.

Eucalyptus—The market remains relatively firm with the volume of sales reported to be good. Price continues at 45c. per pound.

The eucalyptus oil industry at Sukan, near Ponorogo, East Java, contiunes to expand at a slow but steady rate, according to Chemical and Rubber, published by the US Department of Commerce, Business and Defense Services Administration.

The processing plant in 1959 produced 48,906 liters of oil, obtained from 4,516,733 kilograms of leaves. Output was expected to increase by 10 percent last year, and the 1959 profits of $75,000 to be exceeded.

The Sukun factory, established in 1957, reached full production in 1959, but still cannot meet domestic demand.

The current price of the oil is $2.44 per liter, but earlier in 1960 the free market price reached $4 per liter.

One of Indonesia's many essential oils which is known locally as "kaju putih" eucalyptus oil, is used extensively as a remedy for many minor ills, according to Chemical and Rubber.

Geranium—Further weakening is noted in the geranium oils. Algerian material came down from $22 per pound to $19 and Bourbon material came down from $22 per pound to $20 per pound.

Grapefruit—The low of the range continues at $2.75 per pound with many listings over the $3 mark.

Lemongrass—The market remains firm. News from source is that the year's production amounted to 1,250 tons as compared to the anticipated 1,400 tons. Demand is said to be continuing strong.

Sandalwood—The market continues firm and sales are said to be in good volume.

Spearmint—From source comes the word that, all of a sudden producers are

—Continued on page 53

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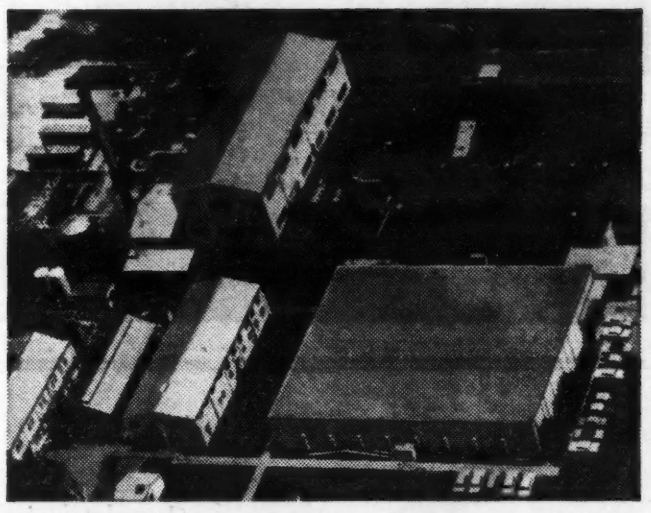
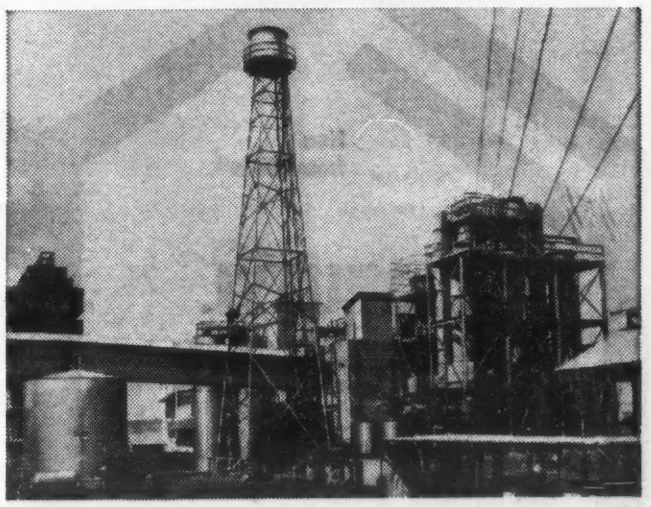


Florida SUN-FILLED citrus oils are produced at 3 Minute Maid plants — Plymouth (shown above), Auburndale and Leesburg, Florida.



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All SUN-FILLED citrus essential oils are guaranteed 100% pure. You can use them with complete assurance because they're produced and packed under continuous U.S.D.A. inspection... completely protected against adulteration and sophistication by tamper-proof seals.

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Essential Oils

—*Continued from page 50*

offering material they had hitherto denied they had. The result is that the overall market is considerably weaker. Spot price, however, remains unchanged for the time being.

Seeds and Spices

Allspice—From its previous price, 70c. per pound, Jamaican material has advanced to 72c. per pound. Mexican material has remained about the same as it has been for some weeks.

Canaryseed—From its previous price, $9 per pound, Moroccan material has declined to $8.75 per pound.

Celery—French material has dropped in price a bit. From its previous price, 37c. per pound, it has gone down to 36c. per pound.

Chillies—Turkish material continues to rise. Three weeks ago, it was 26c. per pound, two weeks ago 27c., and last week 28c. per pound.

Coriander seed — Material from Argentina continues to decline. Three weeks ago the price was 17c. per pound and last week it was listed at 14c.

Moroccan recleaned material, on the other hand, advanced from 18c. to 19c. per pound. Roumanian material has maintained its previous price, 14c. per pound.

Nutmegs—Prices continue at their previously-quoted levels. West Indian material continues at $1.20 per pound and East Indian material continues at $1.18 per pound. Some listings of East Indian material indicate that it ranges from $1.15 to $1.18 per pound.

Paprika — The market for Yugoslavian material is strengthening. From its previous price, 38c. per pound, it has advanced to 39c. per pound.

Pepper—Both Malabar and Lampong black remain at their previously-quoted prices, 46c. per pound.

Muntok white, on the other hand, is going down considerably in price. No immediate spot quotation was available but indications are that the future price will be much cheaper than it was at its last listing, 74c. per pound.

A reason put forth in the trade is that the wide spread between black and white has curbed buying of the white.

Vanilla Beans—The market remains steady at the previously-quoted prices.

Bourbon continues to range between $7.35 and $7.50 per pound; Mexican cut continues to range between $7.25 and $7.50 per pound, and Mexican whole continues to range between $7.75 and $8.50 per pound.

For about a year the price has been steadily declining and this recent firmness is credited to the functioning of a government price stabilization board in Madagascar.

Industry sources say the relatively low prices are helping to stimulate demand which, at the present time, is considered "good." It was explained that there is no well defined pattern in vanilla bean consumption, and that the only slack season is at year's end during inventory taking.

Approximately 55 percent of all the vanilla beans sold in the United States go into bulk extract which is sold to manufacturers of such products as ice cream, bakery products and confections.

The remaining 45 percent goes into the manufacture of household extract.

Staley Has Sequestrants In Commercial Quantities

Two new "Seqlene" brand sequestrants, especially effective in sequestering iron from strongly alkaline solutions, are now available in commercial quantities from the A. E. Staley Manufacturing Company, Decatur, Ill.

"Seqlene Fe-900" and "Fe-1300" are water solutions composed chiefly of sodium beat-glucoheptonate. They differ only in solids. "Seqlene Fe-900" having about 35 percent solids, and "Seqlene Fe-1300," 50 percent. "Seqlene" sequestrants are bottle and equipment cleaning agents marketed by Staley under an exclusive contract distributorship agreement with Pfanstiehl Laboratories, Inc., Waukegan, Ill.

Int'l Flavors Now Owns Kerr Fruit Concentrates

Kerr Fruit Concentrates Inc., formerly Kerr Conserving Company Portland, Ore., has been acquired by International Flavors & Fragrances, Inc., New York.

The Kerr organization will continue its operations as a wholly-owned subsidiary under the direction of Stuart R. Kerr, vice-president and general manager, who has been associated with the company since 1926.

Chemical Mergers

—*Continued from page 7*

tween those that reported a larger number of mergers last year than in 1950 and those which reported a smaller number. Nine groups reported a decrease and seven an increase. Two industry groups reported the same number as in 1959. The total for all manufacturing groups was 635 mergers in 1960 compared with 656 in 1959 and 457 in 1958.

The paper and allied products industry was one of the manufacturing group that reported an increase. There were forty-four mergers publicly reported in this group last year against thirty-two in 1959 and twenty-six in 1958. Petroleum and coal products, on the other hand, reported fewer mergers—twelve in 1960 against eighteen in 1959 and nine in 1958.

In the rubber products industries there were six recorded mergers last year compared with four in 1959 and 1958, while in the stone, clay and glass products industry, the number dropped from twenty-six in 1959 to nineteen in 1960. In 1958 there were sixteen.

Electrical machinery produced the largest number of mergers. This group reported ninety-two mergers last year compared with sixty in 1959 and forty in 1958. A big drop in number were reported among manufacturers of professional and scientific instruments—from thirty in 1959 to seventeen in 1960.

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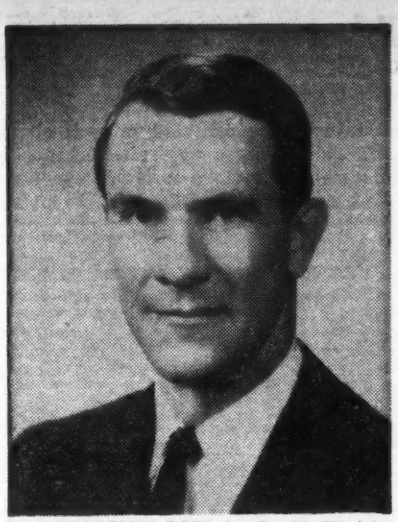

IN MANAGERIAL POST: Lansing M. Hinrichs, promoted to general manager of Girdler Catalysts, a unit of the Louisville, Ky., chemical products division of Chemetron Corporation.

Ind. Biochemicals Starts Specialty Chemical Series

Industrial Biochemicals, Inc., has started production of gluconic acid and sodium gluconate as first in a series of specialty chemicals to be made available from its new fermentation plant in Edison, N.J. The next product to be offered will be USP grade calcium gluconate.

Fred H. Deindoerfer, formerly a research associate at the University of Pennsylvania, has joined the company as technical director in charge of research and production at the Edison plant.

SOCMA Sets Luncheon Date

Synthetic Organic Chemical Manufacturers Association has slated its next monthly luncheon meeting for Thursday (February 16), at the Roosevelt hotel, New York. Alonzo P. Brown, jr., consultant to the director of the Department of Commerce's office of technical services, will give a talk on "Progress in the Development of the Chemical Industry of the USSR."

Pebble Bed Reactor Fuel Coming from Mallinckrodt

Dr. Charles D. Harrington, vice-president of Mallinckrodt Chemical Works, St. Louis, Mo., and general manager of its nuclear division, has announced receipt of an order to supply 20 percent enriched uranium for what is believed to be the world's first pebble bed reactor to advance beyond the research stage.

The reactor is a 15 eMW high temperature gas-cooled reactor for Arbeitsgemeinschaft Versuchsreaktor (AVR) Dusseldorf, Germany. One of the chief characteristics of this reactor is that the fuel elements are in the form of round balls, or so-called pebbles. Basically, the pebbles are made of graphite containing uranium-carbide in the center as the fuel material. Mallinckrodt Nuclear is supplying 325.6 lbs. of 20 percent enriched uranium (U-235) for this purpose.

Ultra Chemical Sets Up Eastern Sales Division

Ultra Chemical Works, a subsidiary of Witco Chemical Company, has formed an eastern sales district for its industrial chemicals division and expanded the midwestern district to include seventeen states.

Robert E. Ritter, previously product sales manager for industrial chemicals, has been named manager of the eastern sales district. H. Reid Halahan and Edward A. Bell have been appointed sales representatives, Mr. Halahan in the east and Mr. Bell in the midwest.

Oxo, a Newcomer

—Continued from page 3

the "oxo" process. The general contractor will be announced within the next few weeks, from among five firms which have submitted bids."

The plant will occupy about twenty acres of a large company-owned site fronting on the Ohio River. Dock facilities will be built on the river to permit shipment of raw materials and finished product by water.

The iso-octyl and decyl alcohol output of the plant will be aimed at such products as detergents, synthetic lubricants, weed killers, surfactants and plasticizers for vinyl resins.

Oxo Chemicals is a fifty-fifty property of its two owners: Pittsburgh Chemical Company, Pittsburgh, Pa., and Amoco Chemicals Corporation, Chicago.

Pittsburgh Chemical is a subsidiary of Pittsburgh Coke & Chemical Company and manufactures a diversified line of chemical raw materials and finished products primarily from coal-based chemicals. Its three operating divisions are: industrial chemicals, protective coatings and activated carbon.

Amoco is affiliated with American Oil Company and manufacturers chemical raw materials from petroleum. Principal products are additives for lubricating oils and gasolines, hydrocarbon resins, aromatic solvents, polybutenes and a number of chemical intermediates used in the plastics, rubber, textile and surface coatings industries. One of its major assets is a phthalic anhydride plant at Joliet, Ill., which uses orthoxylene instead of naphthalene as a raw material.

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Further advance of soybean and oil futures was reflected in cash oil and reached the highest level since April 1957. This strength was reflected in other edible grades. Cottonseed and peanut oils were higher while corn was unchanged but firm. Consumer interest, however, was not keen and restricted to prompt needs. Crude coconut oil was slightly higher, as a result of firmer copra market.

Olive oil remained firm for shipment from Spain, while Tunisian oil was raised $2 per 100 kilos for prompt shipment. Domestic demand was reported slow.

Improved trading in tallow and greases boosted quotations ¼ cent per pound. Trading was fairly active at the advance. Offerings continued light as production was sold ahead. Offers for export were not available prior to March 15. Edible tallow was stronger, advancing ½ cent with higher lard.

Tung oil continued to move up sharply, following the sale of oil from the government stockpile at an increase of 1½ cents to 1¾ cents above previous business. Holders of low stocks were not offering and the market was entirely nominal. Rapeseed oil was firmer and light stocks were advanced ½ cent per pound.

The Department of Agriculture has announced that up to 100 million pounds of refined vegetable oils, including peanut oil, will be made available during 1961 to nonprofit welfare agencies for the assistance of needy persons overseas.

The department will purchase vegetable oil products in the open market under competitive bids.

First purchases are expected to be available for transfer during March to approved welfare agencies.

CCC has requested offers of about 8.5 million pounds of shortening and 4 million pounds of salad cottonseed oil, of which 5,525,000 pounds of shortening are to be packed in three-pound cans and 2,975,000 pounds in 50-pound cans; 2,600,000 pounds of salad oil in one-gallon tins and 1,400,000 pounds in 5-gallon tins. Offers should be submitted to the procurement and sales branch, oils and peanut division, Commodity Stabilization Service, Agriculture Department, Washington 25, D.C.

Price Trends

Advanced

Coconut oil, Pac. coast, ½c. per lb.
Copra, $2.50 per ton.
Cottonseed oil, crude, ¼c. per lb.
Refd., ¼c. per lb.
Greases, ¼c. per lb.
Lard, cash, ½c. per lb.
Peanut meal, $1 per ton.
Peanut oil, crude, ¼c. per lb.
Refd., ¼c. per lb.
Rapeseed oil, ½c. per lb.
Soybean oil, crude, ¼c. per lb.
Refd., ¼c. per lb.
Tallow, edible, ½c. per lb.
inedible, ¼c. per lb.
Tung oil, 1½c. to 2c. per lb.

Reduced

Cottonseed meal, $1 per ton.
Linseed meal, 50c. per ton.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Feb. 12, 1960
106.49	106.60	106.33	120.15

For Current Prices see Page 10

Vegetable Oils

Castor—Buying interest was confined to actual needs. No. 1 Brazilian was available at 17½c. per pound, tankcars, New York, prompt delivery. Domestic grades were without change.

Imports of castor beans and castor oil at New York and Philadelphia last week were as follows:

	Pounds	
	Castor Beans	Castor Oil
Last week	.....	2,444,000
Previous week	.....	788,000
Corresponding week, 1960	219,900	1,200,000
Total this year	.....	11,824,000
Corresponding period, 1960	799,950	11,812,000

Coconut—Firm tone prevailed with higher copra. Crude was quoted at 12⅝c. per pound, tankcars, f.o.b. Pacific coast, February delivery and ¼c. more for March. The New York market was maintained at 13¾c., tankcars, prompt delivery.

Corn—Crude was steady with sales at 16c. per pound, tankcars, f.o.b. mills, prompt shipment. Refined was held at 19.73c., tankcars, New York basis.

Cottonseed—Futures continued to move upward last week on the New York Produce Exchange reflecting the stronger soybean and oil markets. Trading was active, chiefly speculative buying which temporarily brought new higher prices for the season. Cash oil was slightly firmer, but trading was confined to prompt requirements. Refined salad oil ranged from 16c. to 16⅛c. per pound, tankcars, New York, prompt delivery.

Iran and United Arab Republic, rejected all bids for vegetable oils, claiming the cost too high.

Crude cotton oil was firmer and higher. Tankcars were quoted at 12⅛c. per pound, f.o.b. mills, Valley; 12¼c. to 12½c., southeast; 12⅛c., Lubbock and 12¼c., Waco.

Linseed—This market was quiet, but steady. Raw oil was unchanged at 13.10c. per pound, tankcars, Minneapolis, February-April; 13.30c., May-July and 14.22c., f.o.b. New York, prompt delivery.

Oiticica—Trading was light, but a steadier tone prevailed in the market because of the increased cost of tung oil. Tankcars were unchanged at 13¾c. to 14c. per pound, New York, prompt delivery. Drums were without change.

Olive — This market remained unchanged and firm. Spanish oil was maintained at $52 to $53 per 100 kilos, drums, f.o.b. ports, prompt shipment. Shipments from Tunisia were higher and raised to $58 per 100 kilos, drums, c. and f. New York because the Tunisian government expects a smaller 1961-62 crop. Stocks on spot were maintained at $2.35 to $2.40 per gallon, drums, exwarehouse, as to quantity.

Peanut—Crude was higher and sold at 14c. per pound, tankcars, f.o.b. mills, prompt shipment. Refined oil was lifted to 17¼c., tankcars, New York basis.

Rapeseed—Market was firm and advanced to 14½c. per pound, tankcars, New York, prompt delivery. Supplies were smaller and firmly held. Drums were higher at 16¼c. to 16½c., spot, as to quantity.

Soybean—Crude continued to advance reflecting the strength of futures which moved into new high ground. Tankcars were lifted to 12⅛c. per pound, tankcars, Decatur prompt delivery, the highest level reached since early April 1957. Refined salad was higher at 14⅜c. per pound, tankcars, New York basis.

Tung—This market was stronger reflecting sales of government owned oil at another advance of 1½c. to 1¾c. per pound last week and the reduction of CCC offers to 200,000 pounds weekly from the usual amount of 1,500,000 pounds. CCC last week sold 540,000 pounds of tung oil at 28.018c. to 28.28c. per pound, bulk, f.o.b. Marrero, La., for unrestricted use. Bids were received for over 4 million pounds. This advance combined with the tight supply situation caused the local market to score further gains of 1½c. and reached the highest level since May 1953. Trading was limited and reported up to 29c. per pound, tankcars New York, prompt delivery. With offers nil the market was merely nominal around 29c. to 30c. tankcars, same basis. Domestic crop was practically sold up, with producers not offering.

Cottonseed Oil Futures

Sales and prices of prime summer yellow cottonseed oil futures in tankcars (60,000 pounds) on the N. Y. Produce Exchange for the week ended Friday, February 10, follow:

	Sales	High	Low	Close
		Cents per Pound		
March	349	14.65	14.13	14.49S
May	1,046	14.81	14.25	14.63S
July	886	14.90	14.36	14.70S
Sept.	126	14.60	14.10	14.45S
Oct.	25	14.25	13.76	14.15S

Total sales and switches, 2,463 contracts.

Miscellaneous

Cocoa Butter—Market was irregular closing unchanged at 56c. to 61c. per pound, spot, depending upon quantity.

..**Copra**—Market remained steady and

Oils, Fats and Waxes

slightly higher. Prompt shipment was quoted at $172.50 per ton, c.i.f. Pacific coast.

Flaxseed—Tremendous volume of flaxseed traded at the Minneapolis market as prices advanced beyond the $3 level. Bids advanced to $3.05 and the biggest trading came ahead of decline to previous level of $3 a bushel, spot and to-arrive, basis Minneapolis. Over 750,000 bushels were involved. More than half went to exporters at the head of the lakes but crushers were also aggressive buyers. Trading was almost entirely on a to-arrive basis, only four cars in the spot market.

Fats and Greases

Greases—Increased demand strengthened the market. Quotations were lifted ¼c. per pound. Trading was fairly active at the advance. Offers continued light. Choice white grease was quoted at 9½c. per pound, tankcars delivered and yellow grease, sold at 6c., depending same basis.

Lard—Market was stronger due to renewal of government relief program. Cash lard was boosted to 12.275c. per pound, drums, Chicago.

The Department of Agriculture has announced a new lard purchase program in order that this product be made available to needy families. The department last week purchased 4,956,000 pounds of lard in 1-2 pound cartons at prices ranging from 14.64c. to 14.69c. per pound and 16.64c. to 16.79c. in 3-pound tins. Deliveries under the first week's offers will be made during the period March 20 to April 15.

Tallow—Improved trading combined with scanty offers further stiffened this market. Trading took place at an advance of ¼c. per pound. Sellers were reported sold ahead and prices were firmly held. No export offers were available prior to March 15. Bleachable fancy was quoted at 6¾c. per pound, tankcars, delivered; prime, 6½c.; guaranteed fancy, 7c.; special, 6¼c. and No. 1, 5⅞c., same basis. Edible tallow was firmer with lard and advanced to 10¾c. tankcars, delivered. Export interest improved. Guaranteed fancy sold at 8¼c., drums, f.a.s. steamer and bulk was quoted at 7¼c., bulk, f.o.b. steamer.

Fish Oils

Menhaden—Consumer interest has improved though trading was reported still light. Offers of crude were maintained at 6¼c. per pound, tankcars, f.o.b. works, prompt delivery. Steadier tone prevailed, the market reflecting the sharp advance in tung and other drying oils. Refined grades were well held at former levels. Light pressed was maintained at 10c. per pound, tankcars, New York basis.

Production of fish oils totaled 24,385,000 gallons during January-October 1960 compared with 21,911,000 gallons for the same period last year. Exports amounted to 113,212,000 gallons during January-October 1960, 5 percent less than 118,799,000 gallons shipped during the same time last year.

Cake and Meal

Cottonseed Meal — Buying interest lagged and market was easy. Meal 41 percent was quoted at $54 per ton, sacked, f.o.b. Mississippi Valley; $58.50 to $59.50 Alabama, Georgia and Carolina area.

Linseed Meal—Softer undertone developed in this market, reflecting poorer feed business and weight of pressing supplies. Prices declined 50c. for immediate shipment, deferred prices firm. Withdrawals against old contracts were at a fair rate, substantially reduced from January. Extracted meal, 34 percent protein, was quoted $55.50 a ton for prompt; $56 for last-half February forward. Old process expeller meal was unchanged at $61.50 for February-March.

Peanut Meal—Fairly active demand strengthened the market. Old process meal was raised to $56 per ton, sacked and solvent, $53.50 per ton, Alabama-Georgia area.

Soybean Meal—Demand was slow in this market and prices followed a narrow, irregular path. Unrestricted meal closed unchanged, other markets down 50c. to $1 up. Reports of curtailed production in some areas checked declines and prompted slight increase in nearby bookings. Wide fluctuations in soybeans futures contributed to uncertainty on the part of feed manufacturers, many holding purchases to absolute requirements. Meal, 44 percent protein, was held at $57 a ton, unrestricted, bulk, Decatur, for prompt delivery.

Waxes, Vegetable

Improved trading was noted in carnauba grades as a result of the recent decline of 2c. per pound. This brought increased interest especially for prompt requirements and gave the local market a steadier tone. Another factor was the tightening up of the Brazilian situation because offers for shipment were scarcer and firmly held. No. 3 Ceara crude was held at 64c. to 65c. per pound, spot, as to quantity and Parnahyba at 1c. to 2c. higher. Yellows also were steadier with No. 1 yellow moved at 94c. to 96c., spot and Parnahyba, 95c. to 96c., same basis. No. 2 crude was quoted at 78c. to 80c., same basis.

Trading in refined beeswax was more active for immediate requirements. All grades were unchanged, but firm because of the strength of crude. African crude was maintained at 54c. to 55c. per pound, spot, as to quantity, while Brazilian and Central American were scarce and more or less nominal.

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Borden Company Angling For Coated Fabrics Firm

Borden Company, New York, is negotiating for the acquisition of the assets and business of Columbus Coated Fabrics Corporation, Columbus, Ohio.

The Ohio firm, which has assets in excess of $18 million, makes and sells oil-coated, nitrocellulose-coated, polyvinyl-coated, and acrylic-coated fabrics. It also manufactures and sells unsupported polyvinyl chloride film.

Should the acquisition take place, the Columbus firm would operate as a separate division of Borden Chemical Company, under its present management, retaining its name and organization intact.

Water Pollution Bill Aims At More Federal Spending

A bill to increase the federal government's outlay for water polution control to $1.25 billion over the next ten years was introduced in the house last week by Rep. John Blatnik of Minnesota, sponsor of the basic water pollution control law.

The Blatnik bill would also raise the ceiling on the federal contribution to single community projects from $250,000 to $600,000 and take administration of the program out of the Public Health Service and lodge it in a new office in the Department of Health, Education & Welfare.

Kyanite, Mullite, Graphite

—Continued from page 4

for sale "as is" f.o.b. at their storage locations. Most of the Kenya kyanite is stored at New Haven, Ind., with a lesser amount at Mechanicsburg, Pa. The mullite is also at New Haven, Indiana. The graphite is stored at three locations: Romulus, N. Y.,; Rome, N. Y., and Mechanicsburg, Pa.

Requests for bid invitations should be made to the Director, Project Administration Division, GSA's Defense Materials Service, Washington 25, D. C.

Bids for the Kenya kyanite ore and synthetic mullite will be opened by GSA on February 24; for the graphite, on February 28.

RESEARCH MANAGER: James M. Jordan, promoted to manager of plastics market research in the commercial development department of Spencer Chemical Company. He had been senior market analyst for the Kansas City, Mo., company.

Chemstrand Research Center Is Dedicated at Durham, N. C.

Chemstrand Corporation has just dedicated Chemstrand Research Center, Inc., at Durham, N. C., a new facility which will be operated as a wholly-owned subsidiary.

The Chemstrand installation is the first to be completed in Durham's Research Triangle Park. The center has provision for ninety-one research laboratories, not including service laboratories, and is designed to accommodate some 500 researchers.

Tennessee Eastman Appoints

Jay K. Gillenwater has been appointed director of purchases for Tennessee Eastman Company, a division of Eastman Kodak Company, Kingsport, Tenn. Mr. Gillenwater, who joined the company in 1930, has been director of purchases since 1953.

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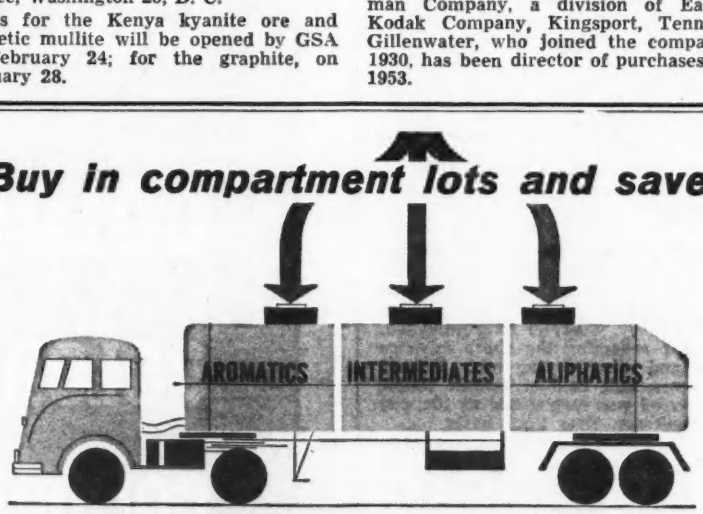

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Petroleum Derivatives

Burgeoning benzene demand blocked by short supply remains the critical factor in the petroleum derivatives market. Toluene and xylene are in good demand and are in more adequate supply than benzene. Chemical uses for all three predominate as solvent business is down due to the reduced activity in recession-struck auto and appliance industries. Orthoxylene is particularly sought after as naphthalene shortage has phthalic anhydride producers seeking the xylene fraction as a substitute for raw material.

Styrene demand is down fractionally but not enough to cause any release of benzene for other areas of the market. Styrene pickup is expected in March.

Latest figures for petroleum operations in November shows prices down when compared to October but considerably higher than in November 1959.

Wholesale price index (1947-49 equals 100) for crude petroleum and petroleum products for November was 120.6, compared with 121 for October and 113.9 for November 1959. Source is Bureau of Labor Statistics.

A decrease in crude oil production and an increase in crude runs to stills are reported by the industry for the week ended January 27.

Daily average crude output fell 17,000 bbls. to 7,198,000 bbls., while average crude runs increased 44,000 bbls. to 8,401,000 bbls. Compared to the like week a year ago runs were up an average of 252,000 bbls. daily.

Runs of foreign crude declined to 1,027,000 bbls. after averaging 1,111,000 bbls. daily in the preceding week.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Feb. 13, 1960
103.74	103.74	103.74	103.64

For Current Prices see Page 10

Aromatic Solvents

Benzene—Strong demand far outstrips available supply.

Old contract customers are being supplied with their needs, it's reported, but new customers are having difficulty lining up volume supplies.

New buyers are having to shop around and dig out suppliers who have material on hand.

Producers themselves are being caught short on occasion. Swaps with deferred return payment are being suggested to producers with excess material by producers with customers and no benzene.

In the domestic market styrene demand is off a fraction. The cut is not deep and is not expected to widen beyond March.

Situation arose when styrene makers made advance purchases in December against an expected January 1 price hike.

Inventory depletion should be accomplished this month with normal ordering expected in March.

Toluene—Supply and demand are approaching balance.

That's the opinion of several trade sources who last week reported that more material was becoming available in the marketplace.

Reason for this increase is not to be found in higher production figures but in the fact that "Hydeal" producers have completed stockpiling of toluene as raw material for benzene production thus cutting demand and freeing material for the market.

Two "Hydeal" plants have come on stream in the past half-year with another scheduled shortly.

The existing plants are encountering the difficulties any new plant meets when operations first commence. As a result toluene feedstocks are not being depleted and no new orders are forthcoming.

Future prospects for toluene are bullish, however, as more "Hydeal" units are slated. Also to rise is a phenol plant scheduled to use toluene as raw material.

Export market remains firm with prices shaded upward from longstanding levels.

Xylene—Demand is brisk.

Orthoxylene calls are strong as phthalic anhydride makers use the fraction when short-supplied naphthalene is unavailable.

Trade sources expect ortho demand to be sustained at a high level for the balance of the year.

Oncoming petroleum naphthalene production will cut into ortho demand by 1962, however.

Phthalic producers by and large prefer naphthalene as a raw material and cannot be counted on to continue ortho consumption once naphthalene becomes adequately supplied.

In Europe the surge in ortho demand appears to be more firmly established as naphthalene requirements show no sign of being fulfilled.

Italy in particular is the scene of ortho expansion. Within the last fortnight the building of an aromatics plant was announced by the Italian affiliate of a US oil company. Close to 30 million gallons of benzene and orthoxylene will be produced at a Naples site.

Crude Oil Stocks

Domestic and foreign crude petroleum stocks at the close of the week ended Jan. 28 were 304,000 bbls. lower than at the end of the preceding week.

Week ended Jan. 28—236,096,000 bbls.

Preceding week—236,400,000 bbls.

This decrease comprises a decrease of 484,000 bbls. in stock of domestic crude and an increase of 180,000 bbls. of foreign crude.

(Source: Bureau of Mines)

LPG's

Demand for liquefied gases dropped 4 percent in November when compared with the same month in 1959.

Production climbed 10 percent, however, with output of liquefied gases at refineries placed at 7.5 million gallons a day.

Ethane-ethylene production jumped 17 percent over November 1959.

Daily average demand for natural gasoline was 11 million gallons, an increase of 1 percent over November 1959.

Waxes

Production and exports of waxes in November declined from October's volume. Stocks and domestic demand showed moderate gains.

In all cases, except imports, November 1960 figures wehe higher than in the same month in 1959.

Output of petroleum-derived waxes in November was 514 bbls. (each bbl. equals 280 lbs.) as against 615,000 bbls. in October and 465,000 bbls. in November 1959.

Through the first eleven months of 1960 production was 5,425,000 bbls. as against 5,082,000 bbls. in the same period of 1959.

Domestic demand was placed at 378,000 bbls. in November, a gain of 3,000 bbls. from the previous month and an increase of 19,000 bbls. from November 1959. For the first eleven months of 1960 demand is estimated at 4,104,000 bbls., some 160,000 bbls. lower than in the same period of 1959.

Stocks in November were 892,000 bbls., 14,000 bbls. higher than in October and 170,000 bbls. higher than in November 1959.

Exports slumped to 122,000 bbls. after hitting 130,000 bbls. in October. In November 1959 exports were 85,000 bbls. Exports through the first eleven months of 1960 were 1,209,000 bbls as compared with 930,000 bbls. in the same period of 1959.

Miscellaneous

Marketing picture for petrolatum, mineral oils and petroleum sulfonates remains stable, sources report.

Prices have been firm since the last general increase with no changes expected in the near run.

Demand slumped in late fall after cosmetic houses completed heavy buying for the Christmas season, sources say, but stock depletion by December prompted steady buying again which has been maintained through the present.

Trade Name Chemicals

Vinyl Stabilizer Producers Timid About Sales Forecasts for Near Term

Consumption of vinyl chloride resins increased by an estimated 20 million pounds last year, as against a 225-million-pound increase in the previous year. Taking note of this fact, producers of vinyl stabilizers are cautious in forecasting sales prospects for their products over the next year or two. In addition, a continued chipping away at resin prices has brought pressure to bear on prices of additive chemicals such as stabilizers. In some applications, where processing temperatures are not too high, epoxies, used as secondary plasticizers, have been found to provide adequate stabilization.

VINYL STABILIZERS: CONSUMPTION TREND

1965 . . .*23.8 million lbs.
1960 . . .*17.6 million lbs.
1959 . . . 17.5 million lbs.
1958 . . . 13.0 million lbs.
1957 . . . 12.7 million lbs.
1956 . . . 11.4 million lbs.

***Estimate**

Source: Tariff Commission

Despite the adverse factors on the current scene, most market men are far from pessimistic about the future for stabilizers in the vinyl industry. They point out that vinyls broke into the billion-pound plastics class on the strength of solid gains in applications in vinyl flooring and a variety of sheeting and film uses.

It's felt that the industry has taken a breathing spell and will continue to show good gains in the future. And trends in plastics production (higher speed of operation and higher processing temperatures) necessitate greater protection of polyvinyl chloride resins against heat degradation.

It is in this processing stage that the bulk of stabilizer output is put to use, although vinyls also require heat and light stability in finished products.

Vinyl Chloride Mold Product Sales

Vinyl chloride molding and extrusion products, largest of the vinyl plastics categories reported by the Tariff Commission, racked up sales of over 280 million pounds last year.

This segment of the market includes wire coating, vinyl phonograph records, rigid vinyls, garden hose and slush molding of vinyl plastisols for such things as toy doll parts.

At an average stabilizer content of 2 percent, molded and extruded vinyls would provide a stabilizer market of 5.5-6 million pounds annually.

However, as with other major vinyl categories (flooring, film and sheeting), stabilizer concentration varies with the application, the type of stabilizer used, the degree of stabilization required and the processing conditions.

A different resin is required to make calandered film and sheeting than would be required for extruded products, such as gaskets, or compression molded phonograph records or organisols or plastisols for rug backing.

In the vinyl flooring field, products may be homogeneous (all vinyl) or vinyl asbestos floor tile. Stabilizer content ranges from 3-5 percent based on resin. But here, too, the amount and type of stabilizer recommended will depend on the type of polyvinyl chloride resin used, the filler and the source of the asbestos used in the latter type.

Flooring use leveled off last year, but still contributed about 160 million pounds to the total of PVC resins consumed. Approximately 5-8 million pounds of stabilizers was used in this area.

For film and sheeting (200 million pounds) stabilizer concentration averages two and a half to three parts per hundred parts of resin and in vinyl protective coating the stabilizer content is about the same.

No Basic Changes Expected

Nothing of fundamental difference in the way of stabilizers is expected in the near future. Basic stabilizer types include inorganic acid derivatives such as lead salts, fatty acid derivatives, organometallics and organic compounds of the substituted benzophenone type.

Use of epoxy plasticizers has become almost standard in production of polyvinyl chloride resins. An epoxidized soybean oil can be used as secondary plasticizer and stabilizer in a PVC formulation where mild heat processing is encountered.

However, under high temperature processing conditions, especially where scrap may be recycled and reserve stability is needed, the epoxy plus a conventional type stabilizer is used.

Stabilizer makers say epoxies are more likely to have cut into plasticizer markets, since a formulator previously using fifty parts of dioctyl phthalate may now be using forty-five parts of DOP plus five parts of epoxidized soybean oil.

From a stabilization standpoint, the best results in a PVC resin are obtained by using the epoxy plus a metallic stabilizer and a chelating agent, sources say.

Among the metallic stabilizers, lead compounds have long been dominant in the electrical field, principally because they are excellent heat stabilizers, they meet the rigid specifications of the electrical trade, and unusual light stability is not a requirement.

National Lead Company, marketing a full line of lead and non-lead stabilizers under the "Dutch Boy" brand name, reports results of tests on special antistatic resins containing an amine type curing agent.

These resins have become of increasing interest with the advent of stereophonic records where background noise is multiplied four or five times.

Molders have experimented with incorporating quaternary ammonium compounds as top antistatic agents in vinyl stock for stereo records. But the quaternaries cause difficulties in stabilizing the resins.

National Lead's Stearate, Fumarate

National Lead reports a combination of "DS-207" (dibasic lead stearate) and "Lectro 78" (tetrabasic lead fumarate) works very well in this application.

The company points out that better than 90 percent of stabilizer use is in vinyl chloride, but that there are other end-uses.

Two company products—"Trimal" and "Lectro 78"—are used as curing agents in "Hypalon" (chlorinated rubber), a product of E. I. duPont de Nemours & Co.

Lead, calcium and other stearates are used as lubricants: for example, in extrusion compounds where there is need for a good mold release agent, and in coatings where water resistance and durability are desired properties. Another lead compound, tetrabasic lead phosphite, is sometimes used as a pigment.

Probably the leader in the stabilizer field is Argus Chemical Corporation, which markets over twenty barium-cadmium stabilizers under the "Mark" trade name as well as a number of special products.

The barium-cadmium and barium-cadmium-zinc stabilizers move into virtually all stabilizer applications. As previously mentioned, lead compounds are dominant in the electrical field and in applications, where crystal clarity is required, tin compounds are most effective.

Argus reports a continuing trend to use of stabilizers in liquid form, although this type of product has been on the scene for several years.

Where high stability and durability are required, stabilizers in powdered form are recommended. However, the ease of

—Continued on page 68

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Coatings Materials

Zinc oxide listings were reduced an average of 2 cents per pound last week as one producer's announcement quickly became market-wide. Before the end of the week, at least three other suppliers adopted the lower listing. The villain of the market was held to be the rising tide of imports, chiefly from England and Canada. Other countries that are reported to be shipping sizable amounts of zinc oxide are France, Holland and Germany.

The initial price-cut was applied only to the lead-free grades of the oxide but the price reduction was reported to have included both American and French processes as well as the pharmaceutical grades. Basic price for untreated, American process lead-free zinc oxide is presently 12½ cents while French process, green seal, is at 14½ cents and white seal at 14¾ cents.

The reduction in the listings of zinc oxide followed the reduction in the price of zinc metal and that of zinc dust. Imports have plagued the industry over the past few years, but a strike at one of the largest zinc processors in 1960 managed to keep supplies artifically low and postponed the price-cut until the strike was settled.

In other areas of the coatings market, the outlook ranged from routine to good. Plasticizer producers are planning on some additional business but this time they anticipate supplies of the phthalate esters will match overall demand. The improvement in supplies and demand is going to be gradual, sources report, and should be apparent by the end of March.

Elsewhere in the coatings spot markets, casein continued to be offered but rarely sold. Supplies are reported to be very ample, and inventories low. Listings held in their lower ranges, basically unchanged from previous weeks.

Price Trends

Advanced
None

Reduced
Zinc oxide, 2c. per lb.

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Feb. 12, 1960
104.55	104.56	104.56	103.03

For Current Prices see Page 10

Synthetic Resins

The following figures show sales in pounds for November and list October's figures for comparison, as reported by the Tariff Commission:

	Sales	
	October	November
Phenolic and other tar acid resins:		
Molding resins	16,713,559	13,338,403
Laminating resins	3,794,398	3,413,939
Protective coating resins, modified, unmodified, except by rosin	1,317,660	1,474,380
Urea and melamine resins:		
Protective coating resins, straight modified	2,248,063	1,764,342
Styrene resins:		
Protective coating resins, straight modified	5,170,111	5,019,538
Vinyl resins:		
Total all types	97,813,951	92,512,251
Alkyd resins for protective coatings:		
Phthalic anhydride types, unmodified	7,207,959	6,559,108
Modified with tar acids, rosin and/or other materials except styrene	3,398,695	3,053,628
Polybasic acid types except phthalic:		
Unmodified	324,549	407,383
Modified with tar acids, rosin and/or other material except styrene	295,000	291,698
Rosin modification for protective coatings:		
Rosin, rosin esters, unmodified (ester gums, esterified with glycerol)	939,932	729,578
Esterified with other alcohols, pentaterythritol, glycols, etc.	639,592	513,678
Modifications with phenolic and other tar acid resins	1,782,476	1,362,579
Modifications with maleic and fumaric acids	1,815,968	1,383,373
All other modifications	3,625,993	3,545,273
Coumarone-indene and petroleum polymer resins	19,002,131	17,606,739
Miscellaneous plastics and resin materials	21,397,288	21,384,314

Total output of resins and plastics materials increased 5.4 percent to 3,874.8 million pounds in the first 8 months of 1960, compared with 3,676.4 million pounds in the same period of 1959, reports the Business & Defense Services Administration.

Sales of resins and plastics materials advanced 3.2 percent to 3,409.8 million pounds, while production in August was placed at 473.7 million pounds, up 12.5 percent from July. Sales were boosted 21 percent to 447.7 from 369.9 million pounds. The percentage increases compare with 1954-59 average yearly increases for August over July of 12.4 percent for production and 16.5 percent for sales. Only the silicones showed a production decrease, 32.5 percent, for the month; all other groups increased, from less than 0.05 percent for the epoxies to 46.7 percent for urea and melamines. Silicones decreased 2.3 percent in sales, while other groups gained, from 5.5 percent for polyesters to 35.2 percent for phenolics.

Production of all plastics and resin materials was 0.2 percent lower in August, 1960, than in August, 1959. Only the polyesters, polyethylenes, styrenes and miscellaneous groups increased, varying from 1.4 percent to 21.9 percent; other groups had decreases from 2.9 percent for urea and melamines to 10.8 percent for coumarone-indene and petroleum polymer resins.

Overall sales were 6.6 percent higher in August, 1960, than in August, 1959. Decreases range from 3.1 percent for the urea-melamines to 10.2 percent for the coumarone-indene and petroleum polymer resins; increases varied from 5.9 percent for the polyesters to 32.9 percent for the miscellaneous group.

The rate of increase of both monthly production and sales compared with those of the same month of the previous year has been declining since April, 1958, when production was 44.4 percent higher and sales 42.0 percent higher. Those rates decreased, July, 1960, production being 5.6 percent lower than July, 1959, and July, 1960, sales 5.9 percent lower. In August, 1960, however, production was only 0.2 percent lower than in August, 1959, and sales had rebounded to 6.6 percent above the old mark, possibly indicating a reversal of the downward trend.

US exports of plastics and resins materials in August, 1960, was more than 10 percent below those of July and 3 percent above those of August, 1969. Considerable decreases from July to August, 1960, amounted to 36 percent for ester gums, 15 percent for styrenes, and 39 percent for vinyls including substantial increases for ion-exchange resins.

In comparison with August, 1959, large percentage decreases occurred in ester gums (29 percent); urea melamines (15 percent); laminates and molded laminates (33 percent); and plastics, except synthetic resins, 89 percent.

US imports of plastics and resins materials in August, 1960, were reported to be off 26 percent from those for July and 35 percent less than August, 1959, owing principally to lower receipts of vinyls, BSDA reports.

Prime Pigments

Aluminum Paste and Powder—The routine conditions that have prevailed over the past few months continue to be the presistent note among the prime pigments. Listings for aluminum paste and powder are reported to be holding in the range of 71 cents per pound for paste, extra-fine, and $1.13 per pound for powder, extra-fine in drums.

Carbon Black—While listings are reported to be firmly established at the levels in effect over the past quarter, domestic demand for channel and furnace blacks is currently at routine levels. Export demand continues to be the surprising factor in the carbon black market.

Despite the fact that several carbon black plants have gone on stream in the past six months, exports have holding at levels slightly above those reported in 1959. This might prove to be another year of rising exports.

Zinc Oxide—A 2c. per pound price cut on American process lead-free zinc oxide was announced last week by one leading producer. At least one other supplier is reported to following the lower listing to meet competition. The price reduction went into effect on Feb. 1.

The new listings call for a price of 12½c. per pound for 40,000 pound carload shipments for untreated types and 12¾c. per pound for surface-treated types

in the same quantities. A one-quarter cent per pound premium is placed on the pellet or granular types of the above forms of zinc oxide.

The weakening in the zinc market is reported to be the result of the rising competition from foreign material. As with lead, listings for zinc have been weakened under the pressure form imports. The last price reduction that hit the zinc market dropped listings for zinc dust 1½c. per pound in the space of two months.

The Business & Defense Administration, in a recent report, placed the level of zinc oxide imports (not more than 25 percent lead) at 1,697,000 pounds. According to the report, this was 17.6 percent higher than the amount of imports for the preceeding month but 46.8 percent below the imports of August, 1959.

Export of zinc oxide pigment in August on the other hand, were reported at 342,000 pounds, up from the 339,000 pounds reported for July but more than 33 percent below the 517,000 pounds exported during August, 1939.

Lacquer Materials

Plasticizers—The outlook for the plasticizer market indicates a gradual improvement both in the level of business and in the supplies of the phthalate esters. While sources caution that the improvement should be gradual in all respects, they anticipate that by the end of March, the market for the esters will take on a refreshing balance in its supply/demand equation that has not existed over the past twelve months.

The supplies of the phthalate esters should improve and is showing signs of greater balance. This is reported to be the result of less dependency on steel mill sources for naphthalene and in the rapidly becoming routine operation of obtaining phthalic anhydride from orthoxylene. Imports, too, are felt to be a big factor in the greater availability of naphthalene.

After a normal drop-off in demand for the phthalate esters, during December and January, sources report that business is currently good with changes for an even better level of business likely in the next few months. Listings for all of the esters are reported to be firm at their January 1 postings.

Naval Stores

The US Department of Agriculture reports that for the week ending Feb. 3, sales of gum rosin were heaviest since mid-December as prices were at slightly lower levels on most grades, but a few grades did move into higher ranges. M and below molten rosin was up from last quotation, USDA reports.

Overall sales for the week were reported at 3,964 drums equivalent, compared to 1,404 for the previous week. Sales f.o.b. plants were reported at: $15.50 WW, $15.61 to $17.15 (mostly $16.0 to $17.15) for WG and M and below reported at a range of $13.91 to $14.24 (mostly an upper range of $14.10).

The market for turpentine was fractionally higher with overall sales for the week reported at 26,500 gallons as against 14,000 gallons for the previous week. Quotations were in the range of 47¾c. to 48½c. per gallon, a range of 48 to 48½c. per gallon predominating. The CCC accepted bids for 7,300 gallons of turpentine at 45¾c. per gallon in storage, under the competitive bid program for export only. A bid was rejected on 6,303 gallons with no price reported for the rejected bid.

Copper Refining Process

—*Continued from page 7*

ities to produce strip and tubing from copper powder is said to be at least 50 percent less than for conventional fabricating technics, starting from cake, ingot or billets.

The Export-Import Bank of Washington has just approved a $13 million loan to Marinduque Iron Mines Agents, Inc., for construction of the proposed plant. This amount, said to be the largest ever made to a private Philippine company, will be matched by Marinduque in pesos.

Foster Wheeler Corporation, New York, is prime contractor for the proposed project, and E. W. Bliss Company will furnish its patented rolling and fabricating equipment for converting powder into strip.

Also scheduled to participate are Chemetals, 20 percent of which is owned by Bliss; and Sherritt Gordon Mines, Ltd., of Toronto, which along with Chemetals is co-owner of the process patents.

The entire process, according to Chemetals, "makes it possible to get high grade copper products from any starting material currently used by the industry, and has additional advantages in that it can handle complex ores, such as copper-zinc combinations, more effectively than conventional methods."

Marinduque, which will own and operate the new plant, is a leading Philippine producer of copper concentrates and other minerals. It operates copper mines, with substantial reserves, at a reported rate of about 75,000 tons a year, now largely sold to Japan for smelting and fabrication.

Located on Iligan Bay, Mindanao, the new facility is expected to yield, at current US prices, an equivalent annual volume of approximately $18.5 million for Marinduque.

Basically the new process calls for leaching of copper concentrates in an ammonia tank, followed by oxydrolysis to produce ammonium copper sulfate, and precipitation of copper powder by pressure and high temperature. Meanwhile, zinc and ammonium sulfate have been separated and emerge as byproducts.

ADM Reorganization Accents Agricultural, Chemical Fields

Organization changes to meet Archer-Daniels-Midland Company's emphasis in the agricultural and chemical fields have just been put into effect by the company.

Divisions which made up the specialty products group have been transferred to the company's other two major groups. The fibre, equipment, and "prochem" Divisions have been added to the agricultural group under the direction of E. A. Olson, executive vice-president.

The federal foundry divisions with headquarters in Cleveland, Ohio, and ADM Canada, Ltd., have been added to the chemical group, headed by W. G. Andrews, executive vice-president.

R. G. Brierley, who headed the specialty group, has resigned his positions as a director and executive vice president.

In explaining the moves, ADM notes that its previously announced decision to concentrate in the agricultural and chemical fields has resulted in the sale interests such as Crosby Boat Division and Applied Radiation Corporation, which had been part of the Specialty Group. The remaining divisions, ADM says, fit most logically into the agricultural and chemical operations and will enable the company to operate more efficiently and serve its customers better.

E. F. Drew Correction

E. F. Drew & Co., whose new food emulsifier divsion was reported in OIL, PAINT AND DRUG REPORTER last week, is located at Boonton, N. J., not at Palmo, N. Y., as incorrectly stated in the article. Palmo, N. Y., is the company's cable address. A typographical error in the second paragraph of the story rendered "stearates" as "searates."

'Delrin': Growing Stronger

—*Continued from page 4*

showerhead face plates, 3.7 million hose couplings and 3.2 million small aerosol bottles.

Althugh duPont has a "composition of matter" patent covering polyformaldehyde, trade observers haven't ruled out the threat of competition, and some even see this as a factor in the company's price thinking.

Celanese Corporation of America, mentioned most frequently as a potential polyformaldehyde producer, will neither confirm nor deny rumors that it is planning a major facility.

Introduced in January, 1960, at 95 cents a pound, "Delrin" was subsequently cut 7 cents on February 1 and 8 cents on June 1.

Before any cuts at all were made, however, the material was already underselling brass on a cubic inch basis. Now, at 65 cents, the plastic will cost 3.34 cents a cubic inch as against 8.61 cents for brass (at 27½ cents a pound), duPont points out The competitive grade of zinc sells at 14½ cents a pound, or 3.39 cents a cubic inch.

It's "Delrin's" light weight, of course, that accounts for the wide difference between cost per pound and cost per cubic inch.

There are already 250 plastics processors working on "Delrin," duPont reports. One of the largest pound-per-unit applications is the Valiant instrument panel, manufactured by Consolidated Molded Products, of Scranton, Pa. In this application, two pounds of the resin replaces nine pounds of zinc "with no sacrifice in performance."

The $50 million "Delrin" investment includes twelve years of research and development and the cost of the company's Parkersburgh, W. Va., facility. The plant's announced capacity is 12 million pounds a year, but estimates of current sales volume would indicate a higher potential.

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New York

AGAR—92 cs, T M Duche & Sons, Leixoes
40 dms, Contall Corp, Santander
ALLYL ISOPROPYL BARBITURIC ACID—10 dms, Hoffmann-LaRoche Inc, Hamburg
ALUM—230 bgs, C M C Chemicals inc, Liverpool
ALUMINUM SULFATE—500 bgs, Bremen
AMMONIUM BICARBONATE—100 bgs, Chemical Manufacturing Co, Liverpool
AMMONIUM CARBONATE—250 cs, Philipp Bros Chemicals, Rotterdam
AMMONIUM PERSULFATE — 200 dms, Bankers Trust Co, Rotterdam
ANILINE DYES—46 dms, Heemsoth Kerner, Liverpool
20 dms, Dye Specialties Inc, Liverpool
10 dms, L & R Organic Products Co, Liverpool
2 dms, Geigy Dyestuffs, Liverpool
40 dms, H Bruckmann & Lorbacher, Hamburg
50 dms, Sandoz Inc, Havre
2 dms, Consolidated Dyestuffs & Chemicals Ltd, Rotterdam
ANISE SEED—200 bgs, Malaga
ANNATTO SEED—260 bgs, Chase Manhattan Bank, Matarani
ARROWROOT FLOUR — 2,800 bgs, Morningstar Paisley Inc, St Vincent
BAY OIL—4 dms, Ungerer & Co, Port of Spain
1 dm, Port of Spain
BEESWAX—50 bgs, Machado & Co, Ciudad Trujillo
50 bgs, Porcella Vicini & Co, Ciudad Trujillo
306 bgs, Empire Trust Co, Lisbon
13 bgs, C E Farris, Puerto Barrios
50 bgs, H H Pike & Co, Tampico
252 bgs, S Zeitlins Sons & Co, Paranagua
11 bgs, Smith & Nichols, Izmir
164 blks, Lobito
33 bgs, Puerto Barrios
33 bgs, Tampico
50 bgs, Puerto Plata
9 bgs, Callao
BERGAMOT OIL—40 qu cs, Fritzsche Bros, Messina
BLEACHING POWDER—100 dms, Chemical Manufacturing Co, Liverpool
BOIS DE ROSE OIL—10 dms, International Flavors & Fragrances Inc, Callao
10 dms, Dodge & Olcott, Callao
BRONZE POWDER—10 dms, L Uhlfelder, Hamburg
CALCIUM CARBONATE — 1,000 bgs, Whittaker Clark & Daniels, London
600 bgs, Whittaker Clark & Daniels, Liverpool
882 bgs, Pluess Staufer, Rotterdam
5,913 bgs, Pluess Staufer Antwerp
CALCIUM PHOSPHATE, DIBASIC—470 bgs, Wessel Duval & Co, Antwerp
CAMPHOR—5 dms, Hostachem Corp, Bremen
CANAIGRE ROOT—13 bgs, F D Keller & Son, Tampico
CARAWAY SEED—200 bgs, Louis Furth, Rotterdam
150 bgs, J B Downing, Rotterdam
250 bgs, Sokol & Co, Rotterdam
100 bgs, Biddle Purchasing Co, Rotterdam
150 bgs, P H Petry, Rotterdam
100 bgs, Rotterdam
CARBROMAL—2 kgs, Fallek Products Co, Liverpool
CARDAMOM SEED—20 cs, K H Landes & Co, Cochin
CARNAUBA WAX—283 bgs, N American Cocoa Trading Co, Salvador
122 bgs, S C Johnson & Son, Fortaleza
56 bgs, Morgan Guaranty Trust Co, Fortaleza
112 bgs, Strahl & Pitsch, Fortaleza
67 bgs, Cornelius Wax Refining Corp, Fortaleza
126 bgs, Irving Trust Co, Parnahiba
188 bgs, Frank B Ross, Parnahiba
38 bgs, Cornelius Wax Refining Corp, Parnahiba
63 bgs, M Argueso & Co, Parnahiba
188 bgs, Baldini & Co, Parnahiba
513 bgs, Balfour Guthrie, Parnahiba
138 bgs, Parnahiba
CASEIN—275 bgs, F H Paul & Stein Bros, Oslo
215 bgs, F H Paul & Stein Bros, Bergen
1,000 bgs, Chemical Bank, Buenos Aires
1,617 bgs, Hamburg
214 bgs, Angra
CASSIA—904 bls, Van Norden & Co, Saigon
170 bls, K H Landes & Co, Tandjong Priok
CASTOR OIL—102 tons, Pacific Vegetable Oil Corp, Recife
200 tons, Anderson Clayton & Co, Santos
520 tons, Recife
300 tons, Salvador
CELERY SEED—87 bgs, Wm M Allison & Co, Bombay
CETYL ALCOHOL—100 dms, Olympic Shipping Co, Liverpool
224 bgs, Orbis Products Corp, Liverpool
CHLORAL HYDRATE—20 kgs, J M Rodgers, Liverpool
CHLORINATED RUBBER—400 bgs, C M C Chemicals, Liverpool
CINNAMON QUILLS—25 bls, Wm E Martin & Sons, Colombo
70 bls, Curacao Trading Co, Colombo
CITRONELLA OIL—50 dms, George Uhe Co, Keelung
45 dms, Holland Colombo Trading Society, Keelung
CLAY—600 bgs, L A Salomon & Bro, Hamburg
COCONUT OIL—1,000 tons, American Trust Co, Zamboanga
1,000 tons, American Trust Co, Cebu
413 tons, D S Hawkins & Co, Manila
CODLIVER OIL—100 dms, Arista Oil Products Corp, Bergen
COPAIBA BALSAM—11 dms, Polarome Manufacturing Co, Manaus
5 dms, Peter Andrea Corp, Belem
CORN OIL—260 tons, Corn Products Co, Rotterdam
448 tons, E F Drew & Co, Liverpool
CORN STARCH—1,000 bgs, Capetown
1,220 bgs, Rotterdam
CRESYLIC ACID—112 dms, Van Oppen & Co, Liverpool
CROTONIC ACID—78 cks, Hostachem Corp, Rotterdam
CUBE POWDER—479 bgs, Foreign Domestic Distributors, Callao
CUMIN SEED—200 bgs, Louis Furth, Khorramshahr
400 bgs, C M Van Sillevoldt, Khorramshahr
583 bgs, Khorramshahr
CUTTLEFISH BONE—100 cs, Nagoya
30 cs, Tunis
1-CYSTEINE HYDROCHLORIDE—2 dms, Lo Curto & Funk, Bremen
DANDELION ROOT—10 bls, Herbarium Inc, Hamburg
DEGRAS—50 dms, Gallard Schlesinger, Bremen
50 dms, N I Malmstrom, Manchester
50 dms, Malmstrom Chemical Corp, Manchester
7 dms, Olympic Shipping Co, Liverpool
DEXTRIN—441 bgs, Stein Hall & Co, Rotterdam
430 bgs, Morningstar Paisley Inc, Rotterdam
700 bgs, Manufacturers Trust Co, Rotterdam
3,4-DIMETHYLPHENOL—5 cks, Aldrich Chemical Co, Rotterdam
DITHIAZAINE IODIDES—5 dms, Overseas Exchange Corp, Liverpool
DOGWOOD BARK—350 bgs, L E Pinkham, Kingston
DYES, COALTAR—137 dms, H Bruckmann & Lorbacher, Hamburg
84 dms, Orlex Dyes & Chemical Corp, Hamburg
12 dms, Baird Chemical Industries, Rotterdam
334 bgs, Sandoz Inc, Rotterdam
21 dms, L & R Organic Products Co, Rotterdam
8 dms, Sandoz Inc, Hamburg
EARTH COLORS—900 bgs, Rotterdam
EUPHRASIA HERB—10 bls, Meer Corp, Hamburg
FENNEL SEED—87 bgs, Louis Furth, Bombay
FISHLIVER OIL—25 dms, Mitsubishi Corp, Yokohama
3 dms, Arista Oil Products Corp, Yokohama
5 cs, Kanematsu N Y Inc, Yokohama
FORMIC ACID—50 dms, Rotterdam
FUEL OIL—100,523 bbls, Shell Caribbean Petroleum Co, Curacao
384,846 bbls, Humble Oil Co, Caripito
205,177 bbls, Humble Oil Co, Las Piedras
467,000 Humble Oil Co, Aruba
101,910 bbls, Asiatic Petroleum Corp, Punta Cardon
105,894 bbls, Asiatic Petroleum Corp, El Palito
115,909 bbls, C H Sprague & Son, Punta Cardon
111,393 bbls, Preferred Oil Co, Curacao
328,368 bbls, Shell Caribbean Petroleum Co, Punta Cardon
125,125 bbls, Hess Inc, Curacao
114,419 bbls, Hess Inc, Punta Cardon
89,544 bbls, Hess Inc, Maracaibo
114,277 bbls, Metropolitan Petroleum Corp, Curacao
103,417 bbls, Mobil Oil Co, El Palito
213,160 bbls, Signal Oil & Gas Co, Amuay Bay
GELATIN—300 bgs, King Shipping Co, Gothenburg
300 bgs, Manhattan Adhesives Corp, Hamburg
40 dms, W Koepff, Hamburg
222 bgs, H Bruckmann & Lorbacher, Rotterdam
1,200 bgs, T M Duche & Sons, Antwerp
223 bgs, Manhattan Adhesives Corp, Antwerp
28 bbls, Coignet Chemical Co, Antwerp
84 dms, D H Burdett, Liverpool
64 dms, H Bruckmann & Lorbacher, Rotterdam
200 cks, Havre
20 bls, Marseille
GERANIUM OIL—10 dms, Hollander Trading Corp, Mombasa
1 dm, National City Bank, Mombasa
GLUE—400 bgs, Jung Forwarding Co, Liverpool
120 bgs, F H Cone, Rotterdam
GLUESTOCK—163 bdls, A M Goldstein, Cristobal
310 bls, Manufacturers Trust Co, Barranquilla
GLYCERINE—271 dms, Matadi
GRAPHITE—250 bgs, Superior Graphite Co, Colombo
250 bgs, Asbury Graphite Mills, Colombo
416 bgs, Asbury Graphite Mills, Hong Kong
GUANIDINE NITRATE—10 dms, Terra Chemicals Inc, Bremen
GUAR GUM—25 bgs, P A Dunkel, Genoa
HEXACHLOROETHANE—272 bgs, Henley & Co, Hamburg
IPECAC ROOT—6 bgs, Dobbeleer Co, Cristobal
IRON BLUE—103 dms, Van Oppen & Co, Liverpool
IRON OXIDE—435 bgs, Reichard Coulston, Malaga
224 bgs, Whittaker Clark & Daniels, Liverpool
KARAYA GUM—124 bgs, Block Drug Co, Bombay
194 bgs, Colony Import & Export Corp, Bombay
67 bgs, Morningstar Paisley Inc, Bombay
KOLA NUTS—112 bgs, D Steengrafe & Co, Kingston
LACTIC ACID—50 dms, A Milliner Co, Liverpool
LACTOSE—13 cs, Gyma Lab, Hamburg
LAUREL LEAVES—72 bls, Levy & Levis Co, Izmir
LEMONGRASS OIL—30 dms, George Uhe Co, Cochin
6 dms, Maywood Chemical Works, Cochin
LICORICE ROOT—10 bgs, Herbarium Inc, Hamburg
LIME OIL—2 dms, Citrus & Allied Essential Oils Co, Puerto Plata
LOCUST BEAN GUM—60 bgs, T M Duche & Sons, Rotterdam
LOGWOOD EXTRACT—60 dms, Kingston
MAGNESITE—40 kgs, Vets Products Corp, Hamburg
20 kgs, Jerdan Chemical Corp, Hamburg
MAGNESIUM CARBONATE—1,400 bgs, Reheis Co, Liverpool
MANGROVE BARK—1,130 bgs, Beira
MARJORAM—120 bgs, Foreign Domestic Distributors, Callao
MELAMINE—400 bgs, Nyhamn
440 bgs, Yokohama
MENTHOL—50 cs, George Uhe Co, Santos
15 cs, Fleishman Burd & Co, Keelung
30 cs, Balfour Guthrie, Keelung
80 cs, American Far Eastern Syndicate, Santos
50 cs, P A Dunkel, Santos
MERCURY—300 flks, Cadiz
MESITYLENE—2 dms, G. A Abood Co, Rotterdam
n-METHYLACETAMIDE—1 dm, Aceto Chemical Co, Liverpool
MOLASSES—477 tons, Pacific Molasses Co, Salaverry
MONOCHLOROACETIC ACID — 160 dms, Orlex Dyes & Chemical Corp, Hamburg
MONTAN WAX—60 bgs, G S Ziegler & Co, Rotterdam
MUSTARD SEED—1,000 bgs, D Young, Copenhagen
150 bgs, P H Petry, Copenhagen
MYRRH GUM—32 bgs, Aden
NAPHTHALENE—450 tons, Rotterdam
NAPHTHOL—9 dms, H Bruckmann & Lorbacher, Hamburg
NOPYL ACETATE—4 dms, Schimmel & Co, London
NUTMEG—140 bgs, Irving Trust Co, Singapore
14 bgs, J H Elton, Singapore
56 bgs, Catz American Co, Singapore
70 bgs, M J Golombeck, Singapore
260 bgs, P H Petry, Hamburg
70 bgs, K H Landes & Co, Singapore
OCOTEA CYMBARUM OIL—48 dms, Stein Hall & Co, Itajai
47 dms, Ernst Roth & Co, Itajai
46 dms, Fritzsche Bros, Rio de Janeiro
OLIVE OIL—195 dms J H Schroder, Barcelona
25 dms, J Paruta, Barcelona
125 dms, Chase Manhattan Bank, Seville
125 dms, National City Bank, Seville
492 dms, Swiss Credit Bank, Malaga
48 dms, Atlantic Bank of N Y, Malaga
100 dms, Canadian Bank of Commerce, Malaga
100 dms, Hanover Bank, Malaga
135 dms, A N Cory, Seville
48 dms, Hanover Bank, Seville
125 dms, Atlantic Bank of N Y, Seville
250 dms, Baloo Oil Corp, Seville
100 dms, Malaga
ORANGE OIL, BITTER—4 dms, Citrus & Allied Essential Oils Co, Puerto Plata
OREGANO LEAVES—221 bgs, H Marmorek & Son, Tampico
OURICURY WAX—206 bgs, M Schmidt, Salvador
OXBILE—16 dms, Wilson & Co, Santos
PALM OIL—116 dms, Matadi
PALMKERNEL OIL—3,135 cs, B M T Commodity Corp, Rotterdam
68 dms, B M T Commodity Corp, Rotterdam
299 tons, E F Drew & Co, Matadi
400 tons, E F Drew & Co, Hamburg
300 tons, Matadi
PAPRIKA—100 bgs, Van Loan & Co, Hamburg
150 bgs, National City Bank, Hamburg
200 bgs, Chase Manhattan Bank, Istanbul
6,330 bgs, National City Bank, Istanbul
2,000 bgs, Brown Bros, Istanbul
2,600 bgs, Istanbul
PEPPER, BLACK—140 bgs, Ludwig Mueller, Singapore
210 bgs, Delano Corp of America, Singapore
140 bgs, A C Dunn, Singapore
70 bgs, Singapore
PEPPER, RED—200 bgs, Louis Furth, Kobe
200 bgs, C M Van Sillevoldt, Iskenderun
200 bgs, Hismoco American Co, Kobe
200 bgs, Hismoco American Co, Iskenderun
100 bgs, Louis Furth, Iskenderun
224 bgs, Kobe
PEPPER, WHITE—200 bgs, Mitsui & Co, Belem
PERCHLOROETHYLENE—597 tons, Francesco Parisi, Venice
PETROLEUM, CRUDE—416,553 bbls, California Oil Co, Sidon
113,799 bbls, California Oil Co, Wadi Feiran
207,743 bbls, Phillips Petroleum Co, La Salina
310,186 bbls, Sohio Petroleum Co, Maracaibo
PHTHALIC ANHYDRIDE—400 bgs, Toms River Chemical Corp, Rotterdam
200 bgs, Yokohama
PIMENTO LEAF OIL—4 dms, Fritzsche Bros, Kingston
1 dm, Norda Essential Oil & Chemical Co, Kingston
POLLACKLIVER OIL—8 dms, Interocean Chemical & Minerals Corp, Yokohama
65 dms, Arista Oil Products Corp, Yokohama
100 dms, F B Wilcon Co, Yokohama
POPPYSEED—200 bgs, Sokol & Co, Gdynia
200 bgs, Globe Products Co, Gdynia
800 bgs, Louis Furth, Gdynia
250 bgs, R J Spitz, Gdynia
500 bgs, Chase Manhattan Bank, Gdynia
500 bgs, Louis Furth, Iskenderun
300 bgs, C M Van Sillevoldt, Rotterdam
100 bgs, Rotterdam
POTASH, CAUSTIC—102 dms, Rotterdam
POTASSIUM CYANIDE—100 dms, Chemical Manufacturing Co, Liverpool
POTATO STARCH—385 bgs, American Key Products, Rotterdam
PYRETHRUM EXTRACT—25 dms, Bemo Shipping Co, Mombasa
36 dms, Mombasa
PYRITES—201 cks, American Metal Climax, Leixoes
QUEBRACHO EXTRACT—5,061 bgs, American Tanners Ltd, Buenos Aires
QUININE SULFATE—7 dms, Lo Curto & Funk, Hamburg
30 cs, American Roland Corp, Hamburg
5 dms, Hamburg
RAFAELITE—40 dms, C A Redden, Liverpool
RESORCINOL—20 dms, Bremen
d-RIBONOLACTONE—10 dms, Hoffmann-La Roche Inc, Hamburg
RICE STARCH—323 bgs, American Key Products, Rotterdam
SAPONIN—10 dms, Karr Ellis, Liverpool
SEEDLAC—500 bgs, C H Timm, Bangkok
500 bgs, Capitol Shellac Corp, Bangkok
SESAME SEED—2,000 bgs, Independent Halvah & Candies, Puerto Barrios
SHELLAC—130 bgs, F H Paul & Stein Bros, Bremen
60 dms, F H Paul & Stein Bros, Bremen
450 bgs, Mantrose Corp, Bremen
290 bgs, National City Bank, Hamburg
SHELLAC WAX—40 bgs, F H Paul & Stein Bros, Bremen
SIENNA, BURNT—340 bgs, Reichard Coulston, Leghorn
SODA, CAUSTIC—108 dms, B T Chemco Inc, Gothenburg
10 cs, B T Chemco Inc, Gothenburg
SODIUM ALGINATE—20 cks, E Mendell, Havre
SODIUM BICARBONATE—1,000 bgs, Chemical Manufacturing Co, Liverpool
SODIUM CYANIDE—700 dms, Chemical Manufacturing Co, Liverpool
SODIUM PERBORATE TETRAHYDRATE—2,000 bgs, Chemical Manufacturing Co, Liverpool
1,000 bgs, Rotterdam
SODIUM PEROXIDE—108 dms, Chemical Manufacturing Co, Liverpool
SODIUM PHOSPHATE—250 dms, Milwaukee Spice Mills, Rotterdam
SODIUM SILICOFLUORIDE—550 bgs, Hamburg
SPEARMINT OIL—10 cs, L A Champon & Co, Yokohama
STARCH—1,000 bgs, Stein Hall & Co, Rotterdam
250 bgs, Connell Rice & Sugar Co, Rotterdam
TALC—455 bgs, Charles Mathieu, Genoa
TAPIOCA—3,102 bgs, Stein Hall & Co, Itajai
450 bgs, American Key Products, Itajai
TAPIOCA FLOUR—1,962 bgs, Stein Hall & Co, Kohsichang
5,152 bgs, Tapioca Associates, Kohsichang
1,075 bgs, Geismar & Co, Kohsichang
5,152 bgs, Morningstar Paisley Inc, Kohsichang
600 bgs, Geismar & Co, Penang
1,667 bgs, Manhattan Adhesives Corp, Itajai
5,520 bgs, Zilka & Sons, Lome
TOLU BALSAM—5 dms, Meer Corp, Puerto Barrios
25 cs, Chase Manhattan Bank, Barranquilla
10 cs, Meer Corp, Barranquilla
TRAGACANTH GUM—37 cs, Meer Corp, Khorramshahr
446 cs, Am-Iran Corp, Khorramshahr
5 cs, Khorramshahr
TRICHLOROETHYLENE—1,398 tons, Miny Corp, Venice
TUNG OIL—220 tons, C Tennant Sons & Co, Buenos Aires
241 tons, Bunge Corp, Buenos Aires
663 tons, Buenos Aires
UVA URSI—30 bls, Meer Corp, Genoa
15 bls, S B Penick & Co, Genoa
VANILLA BEANS—23 cs, Thurston & Braidich, Vera Cruz
VEGETABLE OIL, HYDROGENATED—2,212 cs, Bauer & Loewy Trading Co, Liverpool
VETIVER OIL—1 dm, Synfleur Scientific Lab, Mombasa
2 dms, L A Champon & Co, Port Au Prince
WAX—70 bgs, A Fahner, Hamburg
390 bgs, Matthiessen & Co, Bremen
1,056 bgs, Hostawax Co, Bremen
WAX EMULSIFIER—20 dms, Hostawax Co, Bremen

Los Angeles

CINNAMON QUILLS—100 bls, Berns & Koppstein, Hong Kong
COPRA—500 tons, Procter & Gamble Co, Cagayan de Oro
300 tons, Procter & Gamble Co, Dumaguete
1,200 tons, Wells Fargo Bank, Dumaguete
2,520 tons, Wells Fargo Bank, Cebu
500 tons, Vegetable Oil Products, Cebu
500 tons, Pacific Vegetable Oil Corp, Zamboanga
1,000 tons, Procter & Gamble Co, Cebu
620 tons, Procter & Gamble Co, Tacloban
700 tons, Procter & Gamble Co, Jagna
750 tons, Wells Fargo Bank, Masbate
COPRA CAKE—4,480 bgs, Balfour Guthrie, Manila
CREOSOTE—1,190 tons, Bernuth Lembcke Co, Amsterdam
FISHMEAL—8,652 bgs, Albumina Supply Co, Callao
2,174 bgs, Callao
PEPPER, BLACK—140 bgs, California Commodities Corp, Singapore
PEPPER, RED—50 bgs, Pan Asiatic Co, Kobe
200 bgs, Cal-Compact Foods, Yokohama
PETROLEUM, CRUDE—117,056 bbls, Douglas Oil Co, San Lorenzo
331,004 bbls, Richfield Oil Corp, Bandar Mashur
SESAME SEED—100 bgs, Nieman Bros, Corinto
TAPIOCA FLOUR—448 bgs, Morningstar Paisley Inc, Kohsichang
1,120 bgs, Kohsichang

Philadelphia

ASBESTOS FIBER—600 bgs, N American Asbestos Co, Durban
960 bgs, Chas Kurz & Co, Lourenco Marques
400 bgs, Chas Kurz & Co, Port Elizabeth
BONE—316 tons, Ossa Corp, Buenos Aires
CAMPHOR POWDER—100 cs, Vicks Chemical Co, Kobe
CASEIN—600 bgs, National Casein Co, Melbourne
CASTOR OIL—394 tons, Lobito
CORN OIL—150 tons, Rotterdam
CORN STARCH—672 bgs, Rotterdam
FISHMEAL—3,653 bgs, Chimbote
FUEL OIL—103,135 bbls, Hess Inc, Punta Cardon
110,508 bbls, Shell Oil Co, Punta Cardon
GYPSUM, CRUDE—6,681 tons, U S Gypsum Co, Hantsport
MAGNESITE—907 tons, Split
PERCHLOROETHYLENE—50 dms, International Selling Corp, Marseille
PETROLEUM, CRUDE—455,263 bbls, Gulf Oil Corp, Puerto La Cruz
258,543 bbls, Gulf Oil Corp, Bahias
97,878 bbls, Gulf Oil Corp, Bachaquero
145,209 bbls, Gulf Oil Corp, Punta de Palmas
300,131 bbls, Atlantic Refining Co, Punta de Palmas
119,455 bbls, Atlantic Refining Co, La Salina
133,545 bbls, Atlantic Reifining Co, Puerto La Cruz
234,799 bbls, Continental Oil Co, La Estacada
120,238 bbls, Shell Oil Co, Puerto Miranda
175,410 bbls, Humble Oil Co, Las Piedras
222,187 bbls, Texaco Co, Covenas
224,924 bbls, Mobil Oil Co, Mina Al Ahmadi
SHELLAC—200 bgs, Calcutta
SODIUM CYANIDE—100 dms, Chemical Manufacturing Co, Middlesbrough
SODIUM SILICOFLUORIDE—300 bgs, Riches Nelson, Rotterdam
SULFUR, CRUDE—3,801 tons, E I Dupont De Nemours & Co, Coatzacoalcos
2,520 tons, Dixon Chemical Co, Coatzacoalcos
UREA—1,820 bgs, Nylos Trading Co, Genoa
VANILLA BEANS—41 cs, Ziak & Trieste, Tampico
WATTLE EXTRACT—532 bgs, International Products Corp, Durban

San Francisco

BLOOD, ANIMAL SOLUBLE—1,000 bgs, Myers Sales Co, Copenhagen
CALCIUM CARBONATE—1,600 bgs, Pluess Staufer, Antwerp
CALCIUM CHLORIDE—500 bgs, P W Bellingall, Trieste

—Continued on page 64

FMC MACHINERY MAGIC

REBUILDS EQUIPMENT TO ITS ORIGINAL FACTORY CONDITION

SPOTLIGHT SPECIALS

Buflovak Stainless Sanitary Thermo Compression Evaporator.

American Jacketed Sterilizer; 2 Door; with Track; 30" x 48" x 84".

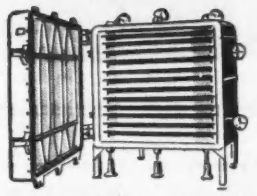
Sharples C27 Super-D-Hydrator in Type 316 Stainless; 40 HP.

Lancaster EAG Muller-Mixer; 5½ cu. ft.

Sturtevant Stainless Micronizers; 30".

Acme Stainless Condensers; 1000 sq. ft.

SAVE $5000. ON THIS DRYER



FIRST'S WEEKLY FEATURE
FIRST COME - FIRST SERVED

Devine Double Door, 20 Shelf Vacuum Chamber Dryer; 86" x 78" complete with accessories at a saving of over $5000.

CENTRIFUGES

Stainless Centrifugals from 30" to 60"; A.T.&M. Tolhurst, Fletcher, etc.
Tolhurst 40" Suspended Centrifuges; Rubber Covered Perf. Baskets and Curbs; Monel Plow-Discharge; 7½ HP.
2 Sharples Stainless Steel Model PN14 Super-D-Canters.
4311 S 1 Sharples C 27 Super-D-Hydrator in Type 316 Stainless with 40 HP Motor.
5147 S 13-14 Two Bird Continuous Screen Type Horizontal Centrifuges; Monel & S.S.; 24" x 24".
2 Bird Rubber Covered, 48" with Plows; Fume Tight; 40 HP.

REACTORS—PRESSURE VESSELS

2 Stainless 400 gal. Reactors Jktd. Agtd. by Patterson and Struthers Wells.
6 Door-Oliver Stainless Steel Thickeners or Reaction Vessels; 550 gal. 5' x 5'.
Stainless Reactor, 2000 gal. Fully Jktd. Agitated.
Nickel Clad Reactor, 7'x11'6".
2 MONEL Reactors; 2800 gal. 6'8"x13'; ASME Jktd. & Intern.
Lancaster Stainless Lined Rotary Reactor or Digester; 50" x 17'4"; Jacketed; good for 300 PSI Internal.
Pfaudler Gl. Lined Reactors; all sizes from 50 to 1000 gal.
Mojonnier Stainless Vac. Pans; 3'x10' and 6' x 12'; others.

EVAPORATORS—DRYERS

Buflovak S/Steel Thermo-Recompression Evaporator.
Buflovak S/Steel Dbl. Effect Evaporator Model 8½-60 D.
Link Belt Roto Louvre Dryer model 502-20.
Pittsburg Lectro Dryers, Bac 25 and BWC 3400.
Devine Vac. Chamber Dryers, Double Door Model No. 36.
Stainless Lab. Drum Dryer, 8"x11½".
Bowen S/S Lab. Spray Dryer.

MIXERS ALL TYPES

Baker Perkins Jktd. 5 gal. UNE-7, Dbl. Arm Mixer with pressure cover; 30 HP.
Readco Jktd. 15 gal. Dbl. Arm Sigma Blade Mixer.
BLAW-KNOX 600 cu. ft. Conical Blender; 9'6" Dia.
Stainless Steel 150 gal. Jktd. Dbl. Arm Mixer with Vac. Cover; Hydr. Tilt.
Other Baker Perkins Jktd. Mixers, 150 gal., 200 and 300 gal.
J. H. Day Cincinnatus Dbl. Arm Mixer; 300 gal. STAINLESS Jacketed.

NOW IN STOCK for IMMEDIATE DELIVERY. ALL SIZES FALCON Ribbon Blenders in Steel or Stainless.

MILLS—PULVERIZERS

2 Stainless Steel Micronizers 30".
Abbe, Ball & Jewell Rotary Cutters; in a wide range of sizes, capacities.
Ball Mills and Pebble Mills by Abbe, Paterson, International, some Jacketed; up to 8' x 8'.
Mikro Pulverizers up to No. 4's.
Fitzpatrick Comminutators; Models D, K and C; motorized.
American Ring Roll Crusher; 50 HP.
Mikro S/S Atomizers; Nos. 6 and 5.
Raymond Imp Mills; many sizes.
Williams Hammer Mills to 60 HP.

OLIVER PRECOAT FILTERS

3" x 2" Monel. 5'3" x 8' Stainless.
(2) 5'3" x 3" Steel or Rubber.
Feinc S/S Rot. Vac. Filter 3' x 1'.
Oliver Cont. Rot. Vacuum Filters. Panel Type; 8' x 8' and 8' x 10'.

FILTERS—FILTER PRESSES

4 Pressure Filters 30" x 56" Type 316 Stainless; 100 sq. ft.
Sparkler S/S Filter Model 14 S 4.
Sparkler Steel Filter Model 33 S 17.
S/S Nutsche Type Filter; 6' x 2'.
Bowser Filter with Pump; 2000 GPH.

SPECIAL OFFERING DIRECT FROM LOCATION
CONTINUOUS FINE GRINDING EQUIPMENT
Being Removed as Operations Terminate

2—Allis Chalmers 7' x 22' (2 Compartment) Compeb Ball Mills with Meehanite Liners, driven by a magnetic-coupled 400 HP Motor.
1—Allis Chalmers 9½ x 810 Preliminator or Continuous Ball Mill; Meehanite Liners, driven by a magnetic-coupled 400 HP Motor.
3—Allis Chalmers 7' x 22' Continuous Ball Tube Mills, with Meehanite Liners, each driven by a magnetic-coupled 400 HP Motor, now operating in closed circuit with
3—Raymond 14 Ft. Double Whizzer Mechanical Air Separators, New in 1950, each driven by 75 HP Motor. May be purchased separately. Send for Prices and Details.

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BRILL FOR VALUES

CENTRIFUGES

2—Sharples C-20 and C-27 Super-D-Hydrator, 316 S.S.
1—Bird 18"x28", Solid Bowl, Continuous, 304 S.S.
2—Bird 24" x 38" Solid Bowl Continuous 304 SS.
1—Bird 32" x 50", Solid Bowl, Continuous, 316 S.S.
1—Bird 36" x 50" solid bowl continuous, 347 SS.
1—Bird 40" x 60" solid bowl continuous, 316 SS, UNUSED.
3—Sharples PY14, PN14 Super-D-Canters 316 S.S.
2—Fletcher 48" Suspended 316 S.S. Perforated Basket.
2—Sharples #16, 304 S.S., 3 HP motor.

REACTORS — EVAPS — CONDS — TANKS

1—150 gal. 304 S.S. jacketed agitated Reactor.
3—Pfaudler 200 gal. glass lined jacketed Kettles.
1—300 gal. Hastelloy B jacketed kettle.
1—650 gal. 304 S.S. Reactor with 100 sq. ft. Bayonet Heater.
1—550 sq. ft. Buflovak monel single effect Evaporator.
1—500 gal. S.S. Mixing Tank with nickel coils.
1—2,000 gal. horizontal 304 S.S. tank 5' x 12'.
1—2250 gal. 316 SS horizontal Tank, 6' x 9'6".
1—2,500 gal. vertical 304 SS Tank, 8' x 7'.
6—7500, 6000 and 2000 gal. Rubber Lined Tanks.
1—12,000 gal. horiz. steel Pressure Tank, 7'6"x36', 200 psi.
6—Stainless Heat Exchangers; 1220, 786, 536, 370, 315, 250 sq. ft.
1—24" dia. x 35', 304 S.S. Bubble Cap Column.

FILTERS

1—#5 Sweetland Filter 304 S.S. 120 sq. ft.
1—Oliver 6' dia. Horizontal Filter, 316 S.S.
1—Oliver 5' x 6' Steel Rotary Vacuum Precoat Filter.
1—U.S. 200 sq. ft. 304 S.S. Auto-Jet Filter.
1—Hercules 400 sq. ft. 304 SS pressure Filter.
1—Oliver 5'3"x8' Steel Rotary Vacuum, vapertite housing.
1—Feinc 5'x6' Stainless Steel Rotary Vacuum Filter.
1—Feinc 3' x 3' Stainless Steel Rotary Vacuum Filter.
2—#10 Sweetland Filters, 27 leaves, 4" centers, 250 sq. ft.
1—8200 gal. 321 SS vertical Tank, 10' x 14'.

DRYERS

1—Buflovak Vacuum Shelf with 20—60"x80" shelves.
2—Buflovak 42"x120", atmospheric double drum Dryers, complete.
1—Buflovak 32" x 90" Atmos. Twin Drum Dryer.
2—Devine 4'x9', single drum, atmospheric.
1—Buflovak 3'x10' Rotary Vacuum Dryer.
1—Baker Perkins 5'6"x6' Rotary Vacuum Dryer.
1—Buflovak 3' x 7'6" Rotary Vacuum Dryer 316 S.S.
6—Louisville Rotary Steam Tube 5'x25', 6'x30', 6'x50'.
2—Louisville 8'x50' Stainless Steel lined Rotary Dryers.
9—Rotary Dryers 34"x30', 4'x40', 6'x50', 6'x60', 7'x80', 8'x87'.
1—Traylor 30"x18' Stainless Steel Rotary Dryer.
2—Link Belt, 7'5"x25', 6'4"x24", S.S. Louvre Dryers.
2—Atmos. Tray Dryers, 16 shelves, 40"x24".
1—P&S 6' wide Apron Conveyor Dryer 48' long.

MIXERS

1—Farrel-Birmingham "Midget" Banbury Mixer.
2—Day Imperial 150 gal. jktd. double arm.
1—Baker Perkins 100 gal., jacketed, double arm, 30 HP.
1—Baker Perkins 50 gal. jacketed, double arm.
5—Day "Cincinnatus" double arm, 250 and 100 gal.
2—Steel jacketed Powder Mixers, 225 and 350 cu. ft.
1—Patterson 6' dia. Conical Blender 15 HP.
1—3' dia. Simpson Intensive Mixer.
1—45' dia. Lancaster Mixer, 7-1/2 HP motor.
1—Patterson Kelly 150 cu. ft. Twin Shell Blender.

MISCELLANEOUS

3—Kinney Vacuum Pumps, 750 cfm, 1 micron, 15 HP.
2—Hardinge 5' x 22" steel lined conical Ball Mills.
4—Mikro Pulverizers, #4TH, 1SH, 1SI and Bantam.
3—Abbe 2½' x 3' porcelain lined Pebble Mill XP motor.
1—Raymond 10" vert Mill, 10 HP.
1—No. 1 Ball & Jewell Rotary Cutter.
1—#18 Cumberland Rotary Cutter.
3—Swenson Walker Continuous Crystallizers, 24" x 30' sections.
2—#842 Rotex Sifters 60" x 84" double deck.
1—#24 Rotex Sifter, 20" x 64", Quadruple deck.

Partial List of Values — Send for Complete Circular

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35-61 JABEZ ST., NEWARK 5, N.J. Tel.: MArket 3-7420

PHILADELPHIA —HAVEN FOR SMART EQUIPMENT BUYERS!

SELECTED RECENT PURCHASES

1—NERCO-NIRO PORT. STAINLESS LAB. SPRAY DRYER.
1—FLETCHER 30" UNDERDRIVEN STAINLESS CENTRIFUGAL.
5—F. J. STOKES #138J-16 VACUUM SHELF DRYERS, 195 SQ. FT., 16 SHELVES 40" x 44", SINGLE DOOR.
1—HARDINGE 8' x 48" CONICAL PEBBLE MILL, AIR-SWEPT.
6—VALLEY 36" ALUMINUM P. & F. FILTER PRESSES, CLOSED DELIVERY, 65 CHAMBERS, HYDRAULIC CLOSURE.
1—ALLIS-CHALMERS 5' x 5' BALL MILL, 75 HP.
1—RAYMOND 50", 5-ROLLER HI-SIDE MILL, DBL. WHIZZER.
5—SWEETLAND #12 FILTERS, (72) STAINLESS LEAVES.
1—ROTEX 40" x 84" DOUBLE-DECK SCREEN.
1—60" DIA. x 35 PLATE, T316SS BUBBLE-CAP COLUMN, 42' HIGH.
2—FRENCH OIL TYPE #2-S SCREW TYPE EXTRACTION PRESSES.
2—STAINLESS STEEL REACTORS, 200 GAL., JACKET & AGIT.
1—GEMCO 60 CU. FT. STAINLESS CONICAL BLENDER.
2—DAVENPORT #3A DEWATERING PRESSES.

DRYERS

5—F. J. Stokes #138J-16 vac. shelf dryers, 195 sq. ft., 16 shelves, 40" x 44".
5—BUFLOVAK 42" X 120" DRUM DRYERS, ASME 160#.
1—American 42" x 120" dbl. Drum dryer, ASME, stainless.
1—Buflovak 42" x 90" dbl. drum dryer.
1—AMERICAN 36" X 84" DBL. DRUM DRYER, ASME, VACUUM.
1—BUFLOVAK 5' X 12' SINGLE DRUM DRYER, VACUUM.
1—Buflovak 32" x 52" dbl. drum dryer, ASME 100# WP.
1—Buflovak 6" x 8" dbl. drum dryer, vacuum.
2—Buflovak Vacuum shelf dryers: 110, 98 sq. ft.
2—Hardinge 8'8" x 70' rotary dryers, ⅜" welded.
2—DAVENPORT 8' X 60' ROTARY DRYERS, 7/16" WELDED.
1—Louisville 4'6" x 25' rot. steam-tube dryer, welded.
1—Hardinge 4' x 30' rot. steam-tube dryer.
1—Bartlett 3' x 15' rotary dryer, everdur shell.
1—Wyssmont #6-18 tray dryer, 18 stainless trays.

MIXERS

50—BAKER-PERKINS #17, 200 GAL. SIGMA JKTD. MIXERS.
1—Baker-Perkins #16, 150 gal. sigma jktd. mixer.
1—BAKER-PERKINS #15-UUMM, 100 GAL. DISPERSION MIXER, 100 HP, ASME JACKET, CORED BLADES, COMPRESSION COVER, MOTORIZED TILT.
1—J. H. Day #6 Cinc., 100 gal., sigma blades, Stainless.
2—Baker-Perkins #15, 100 gal., sigma jktd. mixer.
1—Read 100 gal., sigma blades, non-jacketed.
2—J. H. Day #5 Cinc., 75 gal., sigma blades.
1—J. H. Day #2 Cinc., 20 gal, jktd., sigma blades.
1—Marco continuous Roto-feed mixer, Stainless.

STAINLESS STEEL TANKS

1—5700 gal. horiz., T304 SS, 6'4" x 24', UNUSED.
1—4300 GAL. HORIZ. T304 SS, 6' x 20', DISHED HEADS, 50# WP.
1—3300 gal. vert., T304 SS, 6' x 14', dished heads.
1—3200 gal., vert., T304SS, 6'6" x 12', dished heads, coils.
1—3000 gal. vert., T304 SS, 6' x 15', coils, Vac.
3—2750 GAL. VERT., T316 SS, 7' x 8', DISHED HEADS, COILS.
1—2500 gal. vert., T316 SS, 7' x 7', dished heads, agit.
2—2300 gal. vert., T316 SS, 7' x 8', coils, agit.
4—2250 GAL. VERT., T316 SS, 7' x 6'3", DISHED HEADS.
1—2100 gal. vert., T316 SS, 6' x 9'10", cone bottom.
12—1750 gal. vert., T304 SS hoppers, 235 cu. ft.
1—1600 gal horiz., T304 SS, 5' x 11', dished heads.
6—685 gal. vert., T316 SS, 3' x 13', coils.

EVAP. — EXCHANGERS — CONDENSERS

2—16,200 SQ. FT. QUAD. EFFECT EVAP., COPPER TUBES, CAST IRON BODIES.
1—MOJONNIER 2085 SQ. FT. TRIPLE EFFECT, T304 SS, WITH PREHEATERS.
1—BUFLOVAK 1025 SQ. FT. DBL. EFFECT, T304 SS, SIZE #8-50-D.
1—Buflovak 840 sq. ft. dbl. effect, T304 SS, size #7.5-42-D.
1—Buflovak 710 sq. ft., dbl. effect, T304 SS, size #7-35-D.
1—Buflovak 700 sq. ft. single effect, T304 SS, forced circ.
1—STRUTHERS-WELLS 630 SQ. FT. SINGLE EFFECT, T316 SS, CALANDRIA TYPE.
1—Buflovak 588 sq. ft. dbl. effect, T304 SS, size #6.5-29-D.
1—F. J. Stokes 118 sq. ft. single effect, T316 SS, U-tube still.
2—Rogers 6' dia. vacuum pans, T304 SS, int. coils.
1—1960 SQ. FT. T316 SS, HORIZ. EXCHANGER, ASME 75# WP.
1—1450 sq. ft. T316 SS vert. condenser, remov. bundle.
1—800 SQ. FT. T316 SS VERT. CONDENSERS, ⅝" OD TUBES.
1—730 sq. ft. T316 SS horiz. exchanger, remov. bundle.
4—691 SQ. FT. ANSONIA COPPER DOUBLE-PIPE COOLERS.
1—510 SQ. FT. T316 VERT. COND., REMOV. BUNDLE.
4—T316 SS exchangers-condensers: 427, 425, 410, 400 sq. ft.
10—T316 SS exchangers: 290, 277, 264, 250, 200, 185, 165, 150, 145, 105 sq. ft.
8—T316 SS exchangers, 83, 73, 54, 52, 50, 47, 30 sq. ft.
10—Enzinger 185 sq. ft. T304 SS contin.-flow exchangers.

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1—Williams 5 Roll Hi Side Mill. 50" bull ring. Complete with Super Separ, Blower & Cyclone.
2—Raymond #1 auto. Separators. With Raymond 5' Whizzer Separator.
1—Niagara 4' x 10' Single Deck Ty-Rock Shaker Screen.
2—Gayco 4' dia. Model 38 Mechanical Air Separators.
1—Bird 40" x 60" cont Horiz. SS Centrifuge. 50 HP. Nearly new.
1—Eimco 3' x 6' Rotary Cont. Vac. Filter. Rubber constr.
2—Jeffrey 36" x 36" Type A-2 Swing Hammermills. Roller bearing.
1—Steel Fractionating Tower. 42" dia. x 70' high. 28 bubble cap trays.

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LIQUIDATION
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Pfaudler 500 gal. Type ELL Glass Lined, jktd., agit. Reactor.
Dopp 1000 & 1700 gal. Ni-Resist Dopploy, jktd., agit. Reactors.
Goslin Birmingham 36"x24" Stainless Rotary Vacuum Filter.
Buflovak 6"x8" double drum Rotary Vacuum Dryer.
A.T.&M. 40" & 30" Stainless Susp. Centrifuges, perf. & imperf. Baskets.
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Shriver Stainless 18" P&F closed 4 eye washing Filter Press.
Buflovak 6' Dia. Crystallizers, atmospheric & Vacuum.
Nash #9, #4, K5 and TS10 Hytor Vacuum Pumps.
Stainless & Copper Stills 3500 to 500 gal.

316 STAINLESS COLUMNS
12"x20' Packed
36"x21 Packed
36"x17'—15 Bubble Cap Trays
48"x40'—36 Bubble Cap Trays
54"x30'—26 Bubble Cap Trays
72"x30'—21 Bubble Cap Trays
78"x18'—14 Bubble Cap Trays

COPPER COLUMNS
24"x 8'—15 Bubble Cap Trays
24"x17'—24 Bubble Cap Trays
30"x11'—12 Bubble Cap Trays
36"x12'—15 Bubble Cap Trays
48"x15'—26 Bubble Cap Trays
48"x15'—50 Bubble Cap Trays
72"x16'—16 Bubble Cap Trays

TANKS

STAINLESS (dished heads)
11000 gal. Horiz. 8'x29'6"
6000 gal. Vert. 8'x18'
5000 gal. Vert. w/coils
4500 gal. Vert. 8'x12'
3500 gal. Vert. w/coils
3500 gal. Horiz. 7'x12'
3500 gal. Vert. 8'x9'
1750 gal. Horiz. 6'x8'
1250 gal. Horiz. 5'x8'
1200 gal. 5'x8' agit.
1000 gal. 5'x7' agit.
950 gal. Vert. 5'x5'
750 gal. 5'x5' agit.
500 gal. 3'6"x8' agit.
500 gal. Vert. w/coils
400 gal. 4'x4' agit.
300 gal. 4'x3' cone bot.
150 gal. 3'x3' agit.
125 gal. Vert. 2'x5'
80 gal. Vert. 2'x3'6"

GLASS LINED
2000 gal. Vert. 6'6"x8'8"
2000 gal. Horiz. 6'x10'
750 gal. Horiz. 5'x5'
400 gal. Vert. 4'x4'

ALUMINUM
12000 gal. Horiz. 10'x23'
10000 gal. Horiz. 9'x23'
7000 gal. Vert. 10'x12'
6000 gal. Vert. 8'x16'
1500 gal. Vert. 5'x10'
750 gal. Vert. 4'6"x6'

COPPER
3500 gal. 8'x9' w/coils
3000 gal. 8'x8' w/coils
2000 gal. 7'x7' w/coils
500 gal. 4'x5' w/coils

STEEL TANKS
22000 gal. Vert. 12'x25'
11000 gal. Horiz. 8'x30'
8500 gal. Vert. 8'x22'
5000 gal. Horiz. 8'x12'
5000 to 250 gal. (50)

HEAT EXCHANGERS
2300 sq. ft. Stainless tubes
1000 sq. ft. All Stainless
600 sq. ft. Stainless tubes
600 sq. ft. Copper tubes
420 sq. ft. All Stainless
300 sq. ft. Stainless tubes
235 sq. ft. Stainless tubes
150 sq. ft. All Stainless
100 sq. ft. Stainless tubes
80 sq. ft. Stainless tubes
68 sq. ft. Stainless tubes
30 sq. ft. Stainless tubes
Glass Lined, jktd. 30"x6'

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2x2" Model 15 DLP LaBour
2x2" Model H15-17 Durco
2x1½" 40-24MD Durco
1½x1" Model DHL LaBour

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MISCELLANEOUS
Model "D" Fitzpatrick Comminuter
Squire 500 sq. ft. tray truck drier
Str. Wells Electric EH3 Dowtherm Heater
Anders Automatic Air Dehydrator
Dorr Thickeners 20'x4'
Duriron Vessels 1000 to 100 gallon
Foote Bros. gear reducers Type 25W
Swenson 24"x20' Stainless 316 Crystallizer, Jktd.
Roots Connersville 8"x24" Displacement Meter 60000 CFH
Norwalk Compressor Type SRSSR, 15000 PSI
Cleveland Size 400—YD gear reducers

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EQUIPMENT
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1—Stokes stainless steel jacketed rotary vacuum dryer, 2' x 6'.

2—Theo. Walters Hastelloy B, 300 gal. jacketed reactors.

1—Pfaudler 750 gal. glass lined jacketed reactor, complete with agitator and drive.

1—Struthers Wells type 316 SS 2000 gal. jacketed reactor, complete with agitators and drive.

5—Pfaudler glass lined jacketed reactors, 30 to 300 gal., complete with agitators and drives.

2—Pfaudler glass lined vacuum receivers, 20 and 30 gal.

1—Buflovak stainless steel jacketed rotary vacuum dryer, 3' x 15'.

16—Kinney 2 stage vacuum pumps, Model KMB-1200 and KDH-130.

1—Stokes single door vacuum shelf dryer with six shelves 24" x 36".

2—Louisville stainless steel rotary dryers, 8' x 50'.

1—Allis Chalmers stainless steel rotary dryer, 6' x 50'.

2—Sturtevant stainless steel #7 dustite rotary batch blenders, NEW.

2—Bonnet rotary kilns, 8' x 115', complete with motors and drives.

1—Bonnet steel rotary cooler, complete with motor and drive, 8' x 50'.

1—American 42" x 120" double drum dryer with drive and motor.

1—Stewart Bolling 2 roll mill, chrome plated rolls, 8" x 16".

1—Raymond 2 roll high side roller mill, complete with oil journals.

1—Williams "Comet" 4 roll mill, complete.

10—Robinson stainless steel double ribbon blenders, 125 cu. ft.

1—Stokes stainless steel rotary vacuum dryer, 3' x 15'.

5—Robinson stainless steel double ribbon horizontal blenders, 255 cu. ft.

1—Gemco double cone conical blender, 40 cu. ft.

1—Baker Perkins SS double arm sigma blade mixer, 9 gal.

1—Baker Perkins Size 16 UUEM jacketed mixer, double arm dispersion type, complete with compression cover and 100 HP motor, 150 gal. capacity.

1—Baker Perkins Size 15, 100 gal. stainless steel jacketed double arm sigma blade mixer.

8—Tolhurst 30" and 40" center slung rubber covered centrifuges, with perforate baskets and motors.

7—Western States 40" type 316 SS suspended type centrifuges, complete with perforate baskets, plows and 40 HP motors.

1—Ross 6" x 14", 3 roll paint mill, high speed complete.

3—Mikro pulverizers, Model #1SH and #2TH, complete.

2—Mikro pulverizers, SS #3TH, complete with 40 HP motors.

20—Davis Engineering stainless steel heat exchangers, 102, 119, 136 and 166 sq. ft., NEW.

1—Hersey stainless steel rotary dryer, 3' x 20'.

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BIRD Continuous Centrifuges 18" x 28" 316 S.S. (1952) 15 H.P. Washing

OLIVER VACUUM FILTER—S.S. 316, 3'x6'
COLUMN S.S. 4' D x 65' high, 55 plates.
TANKS S.S. 304, 2500 gal. 7' x 8' new.
MIKROPULVERIZER—2TH—7½ H.P.
KNEADER MASTER — Paterson 2½ gal. vac., jack., variable speed (Inf.)
HEAT EXCHANGERS S.S., 60 to 2300 sq. ft.
CENTRIFUGE—Tolhurst 40" rubber lined, centerslung, 5 H.P.
SPARKLER FILTER—Steel, Model 33-17.

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2—OLIVER PRESS PRECOAT FILTERS 5'3"—Type 316 S.S.

4—RIBBON BLENDERS, 2500 gal., 1200 gal.

2—AUTOCLAVES S.S., 50 gal. 2000 lb., 3½ gal., 2000 lb.

1—DRUM DRYER, Proctor & Schwartz.

4—COLLOID MILLS, 5 HP EX PR., 15 HP, 40 HP.

Machinecraft Corporation
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VACUUM DRUM DRYER

Buflovak 42" dia x 120" long Vacuum Double Drum. Excellent condition. With Receivers, Water System, Stainless Pump, Condensers, and vari-speed drive.

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ROTARY STAINLESS DRYER
DAY HY-R SPEED MILL
NEW 4000 Gal. STAINLESS TANK

CENTRIFUGALS—12" 30" 40" & 48".
CENTRIFUGES—Sharples #5 & 6 S.S.
DRYERS—Hersey 5' x 26' Rotary Stainless
Buffalo 32" x 90" Double Drum Dryer
Buffalo Vac. Drum Dryer 24" x 20".
Despatch Ovens Elec. Heated.
3—Devine & Stokes Vac. Shelf Dryers.
FILLERS—Powder & Liquid. Also Labelers.
FILTERS—#2 Sweetland 12 Stainless covered leaves.
Ertel 6" & 10" Disc type.
FILTER PRESSES—6" to 36" Iron & Wood.
KETTLES—Stainless Jack. 20 to 500 gals.
Dopp 350 gal. Cast Iron Jack. Vacuum.
Devine Impreg. Units 30" & 36" dia.
Steel Alum & Copper 5 to 2,000 gals.
MILLS—Raymond #00 Pulverizer 30 HP complete. Also #0000.
Mikro Pulverizer #4, 2S1, 2TH, 1SH.
Hammer Mills & Pulverizers 3 to 50 HP.
Williams #3 & #2XX Hammer Mills.
Taylor-Stiles 7½ HP Cutter.
Rotary Cutters 1 HP & up.
Sprt-Waid Stainless Spike Crusher.
Pebble, Jar & Ball Mills, Lab to 6' x 8'
3 Roll, 9" x 24", 12" x 30", 16" x 40".
Lehmann 4 Roll W. C. 12" x 36" Steel.
MIXERS—Baker Perkins 100 gal. Jack.
B. P. 15 HP—Masticator Mixer.
Day Imperial 75 & 150 gal.
Change Can Mixers 8, 15, 40, 80 gal.
Day Jumbo 700 gal. horiz. Mixer.
Sprout-Waldron 10,000# horiz. Spiral Mixer.
Blystone 3000# horiz. spiral Mixer.
Day 1000# horiz. Dry ribbon Mixer.
Dry Spiral Mixers 50 to 10,000#.
Lancaster 6' dia. 25 HP & #1, 3 HP.
PUMPS—Vacuum 10 to 500 CFM.
Gould 75 HP Centrifugal 250 PSI.
SIFTERS—Day, Robinson Rotex type.
SOAP MACHINERY—Toilet, Laundry, etc.
TABLET MACHINES—Colton 4½ T.
Stokes R single punch & RD4 rotary.
TANKS—Stainless, GL., Lined, Steel.
MISC. Boilers Gas & Oil. Conveyors.

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107 9th St., Brooklyn 15, New York
STerling 8-1944

CHOICE EQUIPMENT

2—Sparkler 14" & 8" Stainless Steel Filters.
5—Hercules 16" & 8" Square Stainless Steel Filters.
1—Homo Mixer 1 HP XP Motor.
1—Charlotte ND20—S.S. Colloid Mill—XP Motor.
4—Worthite S.S. Pumps—8" x 6"; 3" x 2"; 2½" x 2".
1—Stainless Steel 30 gal. Autoclave 1000 psi w/Jacket & Agitator w/XP Motor.
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1—Kent 20 Gal. Super Pony Mixer.
1—Mikro 3TH Pulverizer 15 HP.

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3—Mikro pulverizers models 3-TH, 2-TH, 1-SH.

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HR 3980: Additives Tag

—Continued from page 3

the bill will clear congress and be signed into law before March 6.

The house commerce committee isn't organized to consider legislation since the Republican members are yet to receive house approval of their appointment.

This may happen today (February 13), however, but no business is likely to occur in the house for a week, so that Republican members may remain away from the session to attend Lincoln Day dinners and celebrations.

Mr. Harris also plans to hold hearings on the bill before it is reported for passage.

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PUMPS — POSITIVE — 1-¼" Blackmer, 1-¼" Viking, 2" Roper, #3600, 4" Viking (15HP), 4" Blackmer (25HP) unused.
AIR SEPARATOR—Gayco 30", Sturtevant 36", Gayco 5', w/motors & Vee drives.
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4—Link-Belt Vibrating Screens 4' x 8'.
1—Jeffrey Vibrating Conveyor.
1—30" Sperry Filter closed del., 3-eye, 39-plates. 40-frames
1—42" Sperry Filter 40-plates, 41-frames. hyd closing, open del.
1—International Ball Mill, porcelain lined, 48" x 60", 15 H.P Unibrake Motor. 3-drums balls Like new
1—Schutz-O'Neill Pulverizer 22". Style D.
1—Abbe Pebble Mill 5' x 22'.
1—Sparkler Filter 33-S-28, with Scavenger Plate, steam jacketed.
1—2 qt. Sigma Blade S.S. Mixer.
1—250 gal. S.S. Kettle, nickel jacket, 100#.
1—Patterson Steam Jkt. Ball Mill 42" x 36" dia.
2—Louisville Steam Tube Dryers 6' x 25'.
1—430 S.S. Tank 3000 gal. vert. ⅛ plate, with 2 pc. cover.
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Obituaries

Howard Berkey Bishop

Howard Berkey Bishop, chemical engineer who perfected manufacturing processes for diphenylamine and anhydrous hydrofluoric acid, died Feburay 6 in Summit, N. J. He was eighty-three years old.

In his early years. Mr. Bishop served with the National Aniline Division of Allied Chemical Corporation, where he developed a diphenylamine process. He was president and owner of John C. Wiarda Company from 1921 until 1929 when it was merged into Sterling Products Company and American Cyanamid Company.

Mr. Bishop was president of Sterling from 1923 until its merger in 1939 into Pennsalt Chemical Company, Philadelphia. In 1941 he founded Kotal Company, in Summit, makers of additives for asphalt.

He was a former president of the Chemists Club in New York. Following his retirement from the chemical industry, Mr. Bishop became a crusader against liquor, tobacco, coffee, tea, chocolate and cola drinks.

E. Paul Gibney

E. Paul Gibney, who retired as director of midwest trade relations for Sterling Drug, Inc., after forty-three years with the company, died February 1 in Clearwater, Fla. He was seventy-three years old.

Mr. Gibney started with Bayer in 1912, in Chicago. He was appointed manager of Sterling's branch office in that city in 1924, and served until 1953 when he was named director of midwest trade relations.

Eugene W. Burr, who retired in 1946 as a Federal Trade Commission trial lawyer, died in Washington, D. C. He was eighty-five years old.

Gilbert H. Montague, authority on antitrust law, died February 4 in New York. He was eighty years old. Much of Mr. Montague's large law practice had been as consultant to oil companies on antitrust matters.

Mary Upshur Von Isakovics, president of Synfleur Scientific Laboratories, Inc., manufacturers of aromatic and flavoring materials, died February 9 in Monticello, N. Y. She was eighty-eight years old.

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Amcel Erects Two Units At Asheville, N. C., Plant

Amcel Propulsion, Inc., a subsidiary of Celanese Corporation of America,, has completed construction of two major research and development facilities at its Asheville, N. C., plant.

A new multibay, high-energy building will extend the company's development and scale-up capabilities for hazardous materials, Amcel says, and a static test stand, capable of test firing rocket motors of 500,000 pound thrust, will handle units containing as much as 300 pounds of high energy material.

Chemicals Foreign Trade

—Continued from page 5

compared with $133.1 million in November. Imports in December amounted to $31.1 million, as against $24.2 million in November.

The rise in chemical exports and imports to new record levels was in contrast to the experience of merchandise generally. While general exports last year exceeded those of 1959, they failed to pass the record established in 1957. Imports on the other hand fell last year below the 1959 total, which was a record year.

The bureau estimated the value of all exports last year at $20,499.7 million, about 16 percent over the 1959 total of $17,621.4 million. The 1957 record volume was $20,850 million.

General imports last year were valued at $14,653.9 million, about 4 percent less than the record total of $15,207.2 million reported in 1959.

Exports of merchandise for the month of December amounted to $1,796.3 million, only $400,000 less than in November. December imports amounted to $1,157.1 million, compared with $1,160.8 million in November.

Imports at US Ports

—Continued from page 60

CALCIUM NITRATE—10,000 bgs, Atkins Kroll & Co, Amsterdam
CARAWAY SEED—100 bgs, California Commodities Corp, Rotterdam
CASEIN—968 bgs, J R Spellacy, Sydney
CUMIN SEED—143 bgs, California Commodities Corp, Genoa
CUTTLEFISH BONE—73 cs, Hoyt Shepston & Sciaroni, Genoa
FISHMEAL—4,396 bgs, Marine & Animal By Products, Talcahuano
13,044 bgs, Albumina Supply Co, Callao
27,360 bgs, Marine & Animal By Products, Arica
8,320 bgs, Wilbur Ellis Co, Arica
4,348 bgs, Iquique
2,178 bgs, Calao
FORMIC ACID—50 dms, P W Bellingall, Bremen
FUEL OIL—74,500 bbls, Texaco Co, Point a Pierre
85,000 bls, Standard Oil Co, Punta Cardon
GYPSUM, CRUDE—15,296 tons, Kaiser Gypsum Co, San Marcos
MUSTARD SEED—1,000 bgs, Morehouse Mustard Co, Copenhagen
OLIVE OIL—25 dms, Parodi Ermino & Co, Cadiz
49 dms, Seville
OREGANO—345 bgs, Wiliams Dimond Co, Marseille
PEPPER, BLACK—152 bgs, California Commodities Corp, Singapore
PETROLEUM, CRUDE—527,571 bbls, Standard Oil Co, Ras Tanura
302,655 bbls, Tidewater Oil Co, Mina Saud
382,190 bbls, Standard Oil Co, Dumai
315,248 bbls, Tidewater Oil Co, Dumai
SAGE LEAVES—100 bls, Manufacturers Trust Co, Trieste
100 bls, Trieste
SESAME OIL—50 cs, A J Fritz, Kobe
SODIUM BICARBONATE—600 bgs, Chemical Manufacturing Co, Liverpool
SODIUM CHLORATE—1,000 bgs, Marseille
SODIUM PERBORATE TETRAHYDRATE—300 bgs, Mattoon & Co, Liverpool
SULFANIC ACID—100 bgs, P W Bellingall, Yokohama
UREA—2,500 bgs, Atkins Kroll & Co, Amsterdam
ZINC-AMMONIUM CHLORIDE—50 bgs, F H Lenway, Antwerp

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SAN FRANCISCO (SUtter 1-5568) — Robert W. Walker Company, 57 Post Street, San Francisco

Trade Name Chemicals

—Continued from page 57

dispersion and handling make the liquid products popular.

Harshaw Chemical Company, another firm basic in vinyl stabilizers, came out with a new "6-V" series within the past year.

Harshaw reports an increase of 43 percent in the company's stabilizer sales in 1959, while the vinyl industry was increasing 26 percent.

The "6V" series is a barium-cadmium-zinc package that eliminates the need for adding more than one stabilizer to the compound or dispersed resin, Harshaw says.

Witco Chemical's Stabilizer Line

Witco Chemical Company offers "Stayrite" vinyl stabilizers which are primarily salts of stearic acid. The company notes an increased use of specialty vinyls that require high concentrations of stabilizers plus other additive chemicals.

For example, it is pointed out that special vinyl flooring of the type used in hospitals has to meet extremely high specifications. Such a flooring would contain a stabilizer plus antistatic agent and ultraviolet absorber.

Other companies in the stabilizer field for many years include Advance Solvents & Chemical Corporation, New Brunswick, N. J. ("Advastab"), and Ferro Chemical Division, Bedford, Ohio ("Ferro Stabilizers").

Ferro, which came out with two new vinyl stabilizers ("Ferro 1776" and "1777") in December, reports an increase in production of new end-products from vinyl plastisols.

The company also indicates there will probably be increased emphasis on development of a stabilizer system acceptable to Food & Drug Administration for application in vinyl films going into food packaging.

Baker Castor Oil's Calcium Ricinoleate

Baker Castor Oil Company has a calcium ricinoleate product, which, while not as effective a stabilizer as a barium-cadmium type, is non-toxic and has FDA approval as a heat and light stabilizer for PVC film to be used in food packaging. FDA allows calcium and zinc stabilizer products to be used in this end-use.

Recent new stabilizer products from Nuodex Products Division of Heyden Newport Chemical Corporation include "Nuostabe 1000-A" for application in vinyl asbestos floor tile.

The product is termed an improvement of previous types based on polyols. The polyols apparently affect dimensional stability in the floor tile due to their water sensitivity, Nuodex reports.

Another fairly recent development: "Nuostabe 1008-A," a barium-cadmium stabilizer featuring extremely low plate-out. (In calendering operations pigments or stabilizers may cause material to stick to calender rolls. This is termed plate-out.)

Metasap Division of Nopco Chemical Company is a comparative newcomer in the stabilizer field, having marketed liquid stabilizers for a little more than a year. Products are barium-cadmium and zinc types marketed under the "Metasap" trade name.

J. P. Frank Chemicals & Plastics Company markets "Presto-Stab" barium-cadmium solids. The company looks for continued improvement of existing stabilizer types.

It points out, however, that a completely organic material which would give to vinyls the aging or antioxidant effect of currently marketed rubber additives would provide a number of advantages. Such a product should ease blending, increase light stability, be non-toxic and facilitate processing.

• **Correction:** January 16 report on textile softeners in this space listed "Velva-Soft" as a trade name of Armour Industrial Chemical Company. Actually, Armour supplies "Arquad 2HT" as a base for a number of household softeners. "Velva-Soft" is the trade name of the Grocery Products Division of Armour & Co.

Nitrogen Wears Two Looks

—Continued from page 4

capacity, both for liquid and solid products. Storage costs less than increased nitrogen capacity. The only way to take care of peak demand, and more importantly, slack demand, is to have some place to put the production.

"Two old-line solids, sodium nitrate and 20.5 percent ammonium nitrate-limestone are presently on this basis. So we do have precedent."

Management Control of Pricing

Then Mr. Hathaway took up still another problem that bothers the nitrogen industry. He described it as lack of management control in pricing and had this to say about it:

"We sometimes wonder whether the agricultural industry does not have too many salesmen. The number of reports emanating from the field as to competitive lower prices is astounding. We strongly advocate retention of pricing approvals in top management within our company.

"This may result in somewhat slower action at times, but it likewise prevents indiscriminate offerings and, we feel, increases gross profits. Too frequently we feel some organizations place authority at a level which will not allow the profit-conscious members to exercise sufficient control. Additionally, in this industry of ours there is very little local action. By that we mean that all organizations must look at local pricing on a national basis. A local price spreads nationally like a careening row of dominoes."

Chemical People Wary of New FTC-er Dixon

—Continued from page 7

was the chief interrogator for the committee and the producer of most of the headlines of fantastic drug profits.

By his questioning of industry leaders in the drug and other industries, it appears that Mr. Dixon has a great concern that prices are largely dictated by a few leading companies, and on bases that have little relation to costs. His associates expect him to make price patterns a top subject of investigation when he takes over the reins of the FTC.

In his new post, he is certain to remain a thorn in the side of the drug industry. He will be moving into the commission, just as its long investigation of antibiotics producers is reaching a climax.

This case is now in the hands of the hearing examiner for a recommended decision to the commissioners. Mr. Dixon enters the scene just in time to participate in the final decision on the investigation.

Who will take over his $16,100 job with the Kefauver committee is a matter of pure speculation. It is a selection for Sen. Kefauver to make and whether he will offer the position to one of his Tennessee constitutents or advance one of the committee's other counsel to the top post even he doesn't know at this time, according to committee aides.

Will Dixon Be in New Kefauver Probe?

It is also a matter of speculation whether Mr. Dixon will be around long enough to handle the committee's announced investigations of drug counterfeiting, and tie-ins between drug producers and financial houses.

The probabilities are that he will not direct these probes as Mr. Dixon plans to resign from the committee as soon as confirmed for the FTC appointment.

Mr. Dixon is no stranger to the FTC. He began his legal career as a trial examiner with the FTC two years after he received his AB degree from the Vanderbilt University in 1936, and the same year he received his law degree from the University of Florida.

Except for service in the Navy during World War II, he remained with the commission until 1957 when he became general counsel to the Kefauver committee.

In his new post, he will replace Earl W. Kintner, who had been elevated from general counsel to chairman of the FTC by former President Eisenhower. Mr. Kintner is presently serving under a recess appointment that expires the moment Mr. Dixon is confirmed.

Mr. Elman, who will be joining the FTC with Mr. Dixon, is the Kennedy replacement for Edward K. Mills, a Republican and also a recess appointment of Mr. Eisenhower. Mr. Elman carries the tag of a political independent. Together with Republican Siguard Anderson, the two will comprise the minority on the commission.

Mr. MacIntyre, a Democrat, promised the next vacancy on the commission, is expected to replace another Democrat whose term expires in September, Robert Secrest.

Meanwhile, Mr. Kennedy is still going over lists of prospective appointees to head up the antitrust division of the Department of Justice. Robert Bicks, who spent much of his time in the department as acting head of the division until the last few months of the Eisenhower administration, is no longer in the department.

Some of the names in the running for this vacancy are Victor H. Kramer, a member of a Washington law firm and former justice department attorney; Herbert N. Maletz, counsel for the Celler antitrust committee of the house; and Harold Levenhal, counsel to the Democratic National Committee, who was prominent on Capitol Hill in the Roosevelt New Deal in framing much of the legislation of that period.

Bids Wanted

Fertilizers, Services and materials necessary to furnish and apply agricultural limestone conforming to MIL-L-14519(CE) dated May 6, 1957, 300 pounds of 60 percent muriate of potash, to be thoroughly mixed with each ton of limestone, total weight per unit ton shall be considered as 2,300 pounds, 554 tons and services and materials necessary to furnish and apply ammonium nitrate in pelleted form at the rate of 200 pounds per acre. Ammonium nitrate shall contain at least 32 percent nitrogen, 55 tons. Bid IFB 61-62B, Feb. 15. Purchasing and Contracting Office, Fort Benning, Ga.

The government of Iran is requesting fertilizer and pesticide quotations for the coming fertilizer year. Chemical Bongah, the department in Iran's Ministry of Agriculture which purchases agricultural fertilizers and pesticides from foreign suppliers for distribution or sale in Iran, wants price quotations from US producers, c.&f. Khorramshehr, on substantial amounts of superphosphate (48 percent) and potassium sulfate (50 to 52 percent). Quotations should be addressed to the Director, Chemical Bongah, Engineer SHOA, Tehran, Iran. This information was made available by the Foreign Commerce Weekly.

Chemical Bongah may soon be in the market for urea, 45 percent; ammonium nitrate 26½ percent; ammonium phosphate, 18 to 19 percent nitrogen and 47 to 49 percent phosphorous and ammonium sulfate, 21 percent.

The Agricultural Bank of Greece is requesting bids on the following: rotenone, 1 metric ton, 5 percent dust. Ethylene dichloride and carbon tetrachloride mixture, 10 to 20 metric tons. Hexachlorobenzene, dust concentrate, 5 to 7 metric tons. Summer oil emulsion, 50 metric tons. Copper dust, 150 metric tons. Ethylene chlorohydrate, anhydrous, 2.5 to 3 metric tons. Bids invited until Feb. 23 by the Agricultural Bank of Greece, Permanent Supplies Committee, 23 Venizelos Street, Athens.

Sodium Chloride, type II, grade A, Fed. Spec. SS-S-550, 800 tons estimated. Bid IFB AV-12066-61-49, March 10. Central Procurement Div., Fort Benjamin, Harrison, Ind.

Trichloroethylene, tech., Spec. Fed. O-T-634A, type II, 11,275 gals., Bid IFB-63077-2372-61B, Mar. 2. An additional quantity of 19,910 gals., is being set aside for labor surplus labor areas under a partial determination. Military Industrial Supply Agency, 700 Robbins Ave., Philadelphia 11, Pa.

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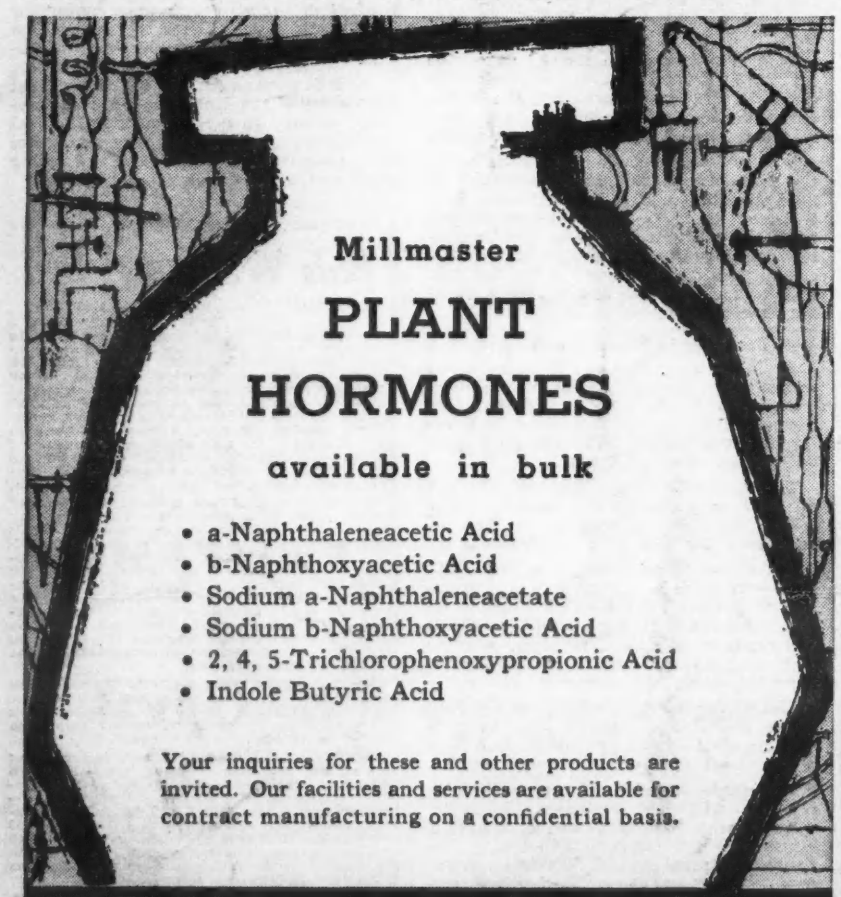

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